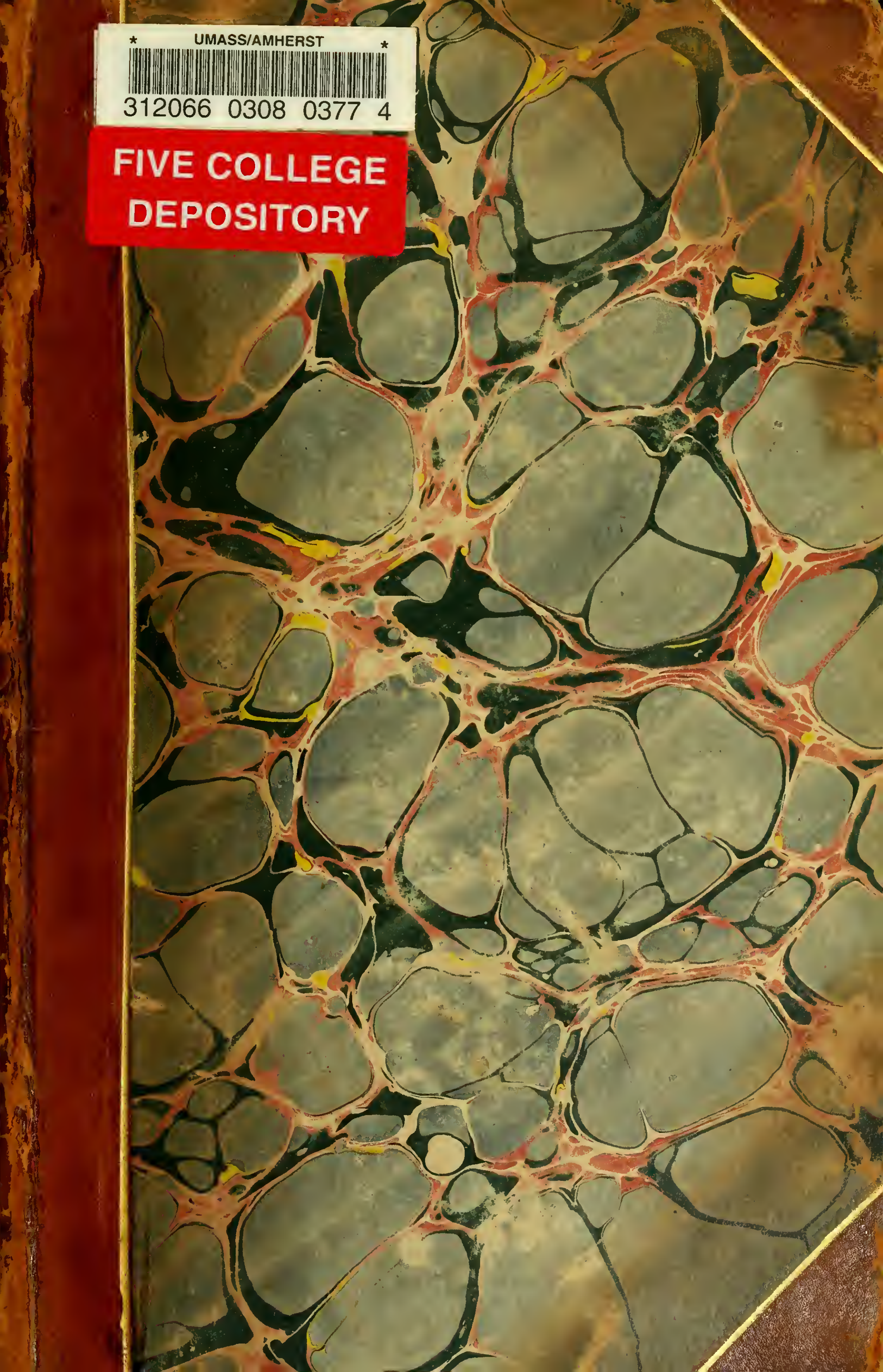

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MASSACHUSETTS
BOARD OF
AGRICULTURE,
STATE HOUSE.

THE

FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

MASSACHUSETTS
BOARD OF
AGRICULTURE,
STATE HOUSE.

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND

RURAL AND DOMESTIC AFFAIRS.

Next to virtue, individual happiness and national prosperity, look to Agriculture for their promotion.

Vol. VII.--1842--1843.

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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JOSIAH TATUM,
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Editorial.

This Number of the Cabinet being the first of another volume, and the Proprietor and late Editor, having associated in preparing and arranging its materials, there would seem a propriety in introducing themselves to their readers, in the new capacity of joint-editors, by a brief exposition of their views. Recollecting, however, that from time to time, for the six years that the Cabinet has claimed the attention of the Agricultural community, the views of its conductors have been freely expressed, and its objects as freely explained, we do not feel that there is much for us now to say, that can be new, or that can throw further light upon the ground that should be occupied by a farmer's monthly paper. When we say, as was said in the first Number of the first volume of the Cabinet, "that it is designed to promote the interests of practical agriculture," we throw open a field as broad as can be desired for an agricultural paper, and express in these few words, almost all that may be necessary to designate the goal, to the attainment of which, our efforts will continue to be directed. "To eat his bread in the sweat of his face," was early promised as man's inheritance. We purpose to strike into no new path—we make no promise of a "royal road," that shall lead to luxuriant pastures and well filled barns, without the toil of travel.

To him who is at all conversant with former modes of tillage—who recollects the state of agriculture in this vicinity, even so lately as fifty years ago, it must be obvious, that if other arts have made bold advances, that of agriculture has by no means, been stationary. We ask for the character of the farmer, credit for the enterprise and perseverance, he so richly deserves, and with the lack of which, he is so often unjustly charged. The average produce per acre, in corn, wheat and grass, has probably, more than doubled in Pennsylvania and the adjacent states, within the last half century. And is it possible that this should have been the case, if our farmers had been indifferent to the progress of every thing else around them, and had only treated their lands with the exhausting processes, that follow upon inactivity and lack of thrift? Who that is fifty years old, does not recollect the introduction of clover—the use of plaster and of lime, and the effects that were at once produced by these additional means—these fresh stimulants, that have ever since been spreading and multiplying themselves in all directions, and in the hands of the skilful manager, with a success, that has made fields that were barren, to laugh with abundance?—Look again at the use of marl, in parts of New-Jersey, Delaware, Maryland and Virginia, and the laborious industry with which these regions are explored, and their rich treasures borne away, to change the very character of the soil, and to treble and quadruple the crops of its owner. Has there been no intelligence—no forecast manifested in these operations? It is to enlighten this intelligence—to throw forward this forecast, and to place within reach of every farmer, every facility for the enriching of his land, and the improvement of his condition, that the efforts of the Farmers' Cabinet will be directed. And is the farmer to derive no benefit from these efforts? This appears to us impossible. Had the man who first introduced the artificial grasses—who first used plaster, lime and marl, been able to keep the secret of their effects to himself;—if this knowledge had not been spread far and wide by books, and by conversation, what, we would ask, would now be the state of our agriculture? Knowledge delights in its own diffusion; and the great improvements to be witnessed in the face of the country, are fairly attributable to the rapid spread of every species of information, tending to enlighten the farmer in his calling. Who that recollects the hard and watery potatoe, that he was obliged to be satisfied with fifty or sixty years ago, is not surprised at the change which care and cultivation have brought about, in the character of this root? Witness the introduction of the Revolving Horse-rake—a simple machine, it is true, but hardly yet duly appreciated;—and the consequences resulting from the efforts so successfully made to improve the stock of cattle, horses, sheep, &c. These are mentioned as a few of the numerous instances that illustrate the onward march of our general agriculture; and to show the probability of a continued progress.

It shall be the earnest endeavour, as well as the duty of the Editors, to throw before the readers of the Cabinet, the information which their extensive correspondence, and exchange of papers, as well as other means, may put them in possession of, that shall have a tendency to promote the interests of this important branch of national industry. And we respectfully and earnestly invite a continuation of communications from practical men. They have heretofore enriched our pages, and given to them an interest, which we are particularly desirous to sustain. We are far from wishing that the subjects embraced on our pages, shall *seem* even, of an exclusive character. We do not mean that they shall be confined to lime, the plough and the bullock, but we would of choice occupy a much broader field. Domestic education, and subjects of domestic economy, are of continual interest to the farmer, and will not fail to claim our attention;—and why may we not here urge our *female* friends, more frequently to throw in *their* mite, and give increased variety and life to our matter-of-fact pages? Natural phenomena—general statistics—incidents of travel, that have a bearing upon the leading objects of our work, and a thousand other subjects interesting to the farmer at his fireside, and the family group around his table, will continue occasionally to fill a column, and thus be thrown into common stock, for the common good.

To promote the interests of agriculture, we repeat, will be our object: we invite its friends to co-operate with us, and make the Farmers' Cabinet worthy of the great cause it advocates—worthy of the community in which it is published, and of the class among which it circulates.

Private credit is wealth—public honour is security: the feather that adorns the royal bird, supports his flight; strip him of his plumage, and you fix him to the earth.—*Junius.*

Culture of the Vine.

We notice a letter from Mr. Longworth, of Cincinnati, to the Editor of the Horticultural Magazine, published in New York, in which some useful observations occur on this subject. Mr. L. has been long known as a distinguished amateur in things of this sort; and the vine particularly has received from him a large share of judicious attention. He has given up mostly, if not altogether, the attempt to cultivate the European species, and has found his labour best rewarded by procuring and improving the best varieties of the native vine. The result of his experience in this particular is worthy of note. The varieties of the indigenous vine in this country, and one of the best modes of ascertaining the fitness of soil and situation for the successful growth of this delicate fruit, would no doubt be by observing the size and flavour of the wild grape as it is found in its native state. On the Eastern Shore, particularly in the lowest part of the peninsula, the native grape will be found, if our recollections do not mislead us, excellent in all qualities that are requisite for making good wine. A light soil is especially adapted to the vine. We take the following from Mr. Longworth's letter:

"I have three varieties of native grapes which I consider far superior to the Catawba for the table. They have none of the hard pulp common to the Catawba, Schuylkill, Muscadel, and the Isabella. For the table they are equal to the Meunier, or Miller's Burgundy, and as free of pulp. One of them, which I first met with a few years since, I call the Ohio grape. The vine is perfectly hardy, a fine bearer, has never had the mildew or rot, and the branches very large, say four times the size of the Burgundy. I sent a bunch of these grapes to Boston last fall, but it was too long on the road to be in perfection. I will give five hundred dollars for a root of native grape that, in quality of the fruit and size of the bunch, shall surpass it. The other two are equally good for the table, perfectly hardy, and great growers.

"I was surprised, when East, to see no good native grapes. At my different vineyards, I have about sixty acres in grapes, but not all in bearing. Last season I had not half a crop, with the exception of one vineyard, where the fruit were abundant and fine.

"There is, perhaps, no fruit so much affected by circumstances of soil, position, and culture, as the grape. By taking the native vine the probabilities of success will be greatly increased, since its quality may be better known, and the necessary situation as it respects soil and exposure more surely ascertained."—*Balt. Amer.*

For the Farmers' Cabinet.

On Soiling Cattle.

Mr. Editor,—In addition to Mr. Jabez Jenkins's very interesting and satisfactory statement relating to the soiling of cattle during the summer, and in which he has proved that the system, even in this country, of high wages and low rents, *will pay*, I beg to be permitted to copy from the second volume of the Agricultural Memoirs of the Philadelphia Society, extracts, contained in a letter addressed to the Society, by John Lorain, on this highly important subject, which ought, assuredly, to claim more attention than it does at the present day, from our practical men. But it is passing strange, that we have no instances on record, so far as I know, of perfect success in the attempt to *fatten* cattle by a system of soiling; and although the failures, both in the case of Mr. Jenkins and of Mr. Lorain, are recorded, and appear quite sufficient to account for all, yet it does not appear that either of these gentlemen has ever attempted to rectify the very palpable error into which they had fallen; although both have had the magnanimity to acknowledge it: this appears strange indeed, and leaves the field open for another experiment, which would scarcely be found to fail, one would suppose, after the ground of failure had been so marked and pointed out. And it is a matter of astonishment, that Mr. Lorain should a *second* time have attempted to feed with the second cut of clover, seeing, as he already had, the effect on the health of the cattle, in the first year of the experiment! But being thus forewarned, have we not a right to expect that the next person who makes the experiment will *succeed*, by preparing beforehand a succession of crops suitable for the purpose, and not be compelled to feed with that food which has repeatedly been found to be improper, or to attempt the experiment on cattle, the refuse of a drove, and confessedly of an unsuitable age? *I guess we have*, and then, I for one, am in no fear for the result. Mr. Lorain says, "I am now trying to *fatten* 27 *young* healthy steers, rising up from about five to nine hundred pounds; also seven three-year old runts and a cow, by soiling them in yards, where they have shelter from sun and rain, and good spring water at will; fresh grass being also given them twice a day, under my own inspection. For two years past I have not succeeded, owing, as I suppose, to deficiency of spear-grass; for they improved as fast as expected, until the second cut of clover, which caused a frothing from the mouth; and they would scarcely eat a sufficiency to keep them alive. But the *economy* of feeding in this way, has not been exaggerated by reputable European writers; in this I think I cannot be mistaken, as correct accounts are kept for every field and transaction of my farm. One man, and a boy twelve years old, feed the above, together with six horses and three milk cows, one bull and a large ox, which is grain fed; and where the grass is good, the labour is not hard, the manure being worth more than their labour. And although Dr. Anderson's mode of making hay under cover, may be rather visionary on an extensive scale, here it may be beneficially practised, and not a fork-full lost by over-feeding." B.

July 13th, 1842.

For the Farmers' Cabinet.

Wheat on Clover-lay.

Mr. Editor,—Numerous are the articles which have appeared from time to time in the Cabinet, recommending the sowing of wheat on clover-lay after one ploughing, and this in preference to an often repeated stirring, even when such treatment might be seasonable, and could be afforded without inconvenience or at extra cost of much labour. Now, I have six acres of clover-lay at the present time, which I wish to sow with wheat; the first crop of hay has been carried, and the second crop has shot six or eight inches in height—what is the plan which your practical readers would propose for my adoption? 1st. Would they recommend me to take another crop of hay, and after dunging the land, turn it down with a small and deep furrow, and sow wheat? Or 2ndly. Would they prefer that I should turn down the second crop of clover as manure, and sow the wheat after once ploughing? Or 3dly. Would they have the clover partially fed and the land turned over, so to lie for a season, then to be run back and worked with the harrows, and then turned down again, as has been proposed? I should say, the land is in good heart, and is rather stiff, yet by no means so as to require the turning in a heavy second crop of clover, to act *mechanically* as a pulverizer of the soil; while I am free to confess that I have never found great benefit from a dressing of green clover on light soils, where the action might be expected to be *chemical* chiefly; the effects of burying green crops, being rather to give a sudden spring to the wheat crop; a thing of all others, perhaps, to be deprecated at that season of the year. Nor, for the same reason do I, therefore, deem the dunging of the land to be recommendable—but I am dictating, rather than eliciting answers. I would also ask, although I have sufficient dung prepared for the purpose abovementioned, ought I not rather to carry it on a twelve acre field of young clover adjoining, and there mix it this winter with bank-earth and muck; and after fermentation has passed, turn up the whole with a good allowance of quick-lime, *secundum artem*, and give it all in top-dressing early in the spring to the young clover, preparatory to a seeding with wheat the next autumn, according to the plan proposed in a late Cabinet? Remarking, that here will be a double quantity of land dressed, with a pretty good assurance of *doubling* the crop on twelve acres instead of six of clover, which would also give two crops of hay, and afford a seed-bed for the wheat, of double the value of a fresh coat of stable dung. I would therefore, respectfully propose to my friends to say what are their opinions of the following plan, viz: to turn all my stock into the second crop of clover abovementioned; so as to feed it down as quickly as possible, and cheat the tumble-bugs and other industrious families, who will be busy in collecting and burying the droppings, as cases for their eggs, almost as quickly as it falls; putting an end to their labours, by *tumbling them* to perdition with the ploughshare, before they have time to complete them; and upon this sow the wheat in good season. S.

July 18th, 1842.

For the Farmers' Cabinet.

Reasoning Faculty in Brutes.

Mr. Editor,—My young friends have been much amused and delighted with the article in the last Cabinet, on the sagacity of the dog, and in return have requested me to hand you the enclosed, which has been published in the Knickerbocker; the account is said to be worthy of all credence; indeed we know not at what point the reasoning faculty of brutes ceases. A Subscriber.

"A few years since we were passing by an orchard in which a yoke of cattle were pastured. The apples were ripe, the cattle were very fond of them, and those that fell were quickly eaten up by them. Gradually they had gathered from the branches all within their reach, and were now compelled to wait for such as fell off themselves. We observed one of the oxen to walk repeatedly around one of the trees, and make a number of ineffectual efforts to reach some of the fruit. Suddenly he stopped, took one of the branches in his teeth, and gave the tree several violent shakes. The apples rattled off merrily; he let go the branch, and had a hearty meal as the reward of his sagacity. The only question is, did he design to shake off the fruit! It can only be said, if a man had wished to accomplish that effect, he could not have devised a more successful method, or gone more directly to the end in view; why then refuse to the one, what we grant to the other? By common consent, the title of "half reasoning" has been awarded to the elephant, and a multitude of proofs might be cited to show that the appellation is not undeserved. He has been known after stepping upon a bridge, to refuse to cross it, as unsafe, and prefer swimming a river with his attendant, to passing the bridge. A shilling was thrown to an elephant in a menagerie; it rolled to the side of the place in which he was confined, and lodged close to the foot of the upright boards that formed the partition. The phrehensile part of the trunk, delicate as it is, could not grasp it, and the spectators who saw him repeat his trials, concluded he would abandon the attempt. He, however, reasoned differently.—Placing his trunk close to the plank, and immediately over the piece of money, he blew with all his force, and the shilling immediately dislodged and fell within his reach. In this case there was evident reflection, a reasoning from cause to effect, and a nice adaptation of means to the end; in other words there was design.

"We have noticed in a late number of the London Lancet, an interesting account of intellectual developement in a couple of dogs, belonging to a French gentleman of the name of Leonard, resident in London. The dogs are of the Spanish breed, and the writer says, when introduced to him by Mr. Leonard, with true French politeness, both bowed very graciously, and seated themselves on the hearth-rug. A great variety of experiments were then made with the animals, such as through the exercises of the *menage*, exchanging a variety of different coloured cards with each other, bringing to their master meat, bread, or cards, as commanded; Mr. Leonard sitting with his back to the dogs, and giving his directions in such a manner, and at the suggestion of the writer, as to put their intelligence to a severe test. So rapid were his orders, that without a perfect understanding of his words, obedience would have been impossible. The writer adds:

"'After many other performances, evincing the wonderful sagacity and perception of the dogs, Mr. Leonard invited me to play a game of dominoes with one of them. The younger and slighter animal then seated himself on a chair at the table. Mr. Leonard and myself placed ourselves opposite. Six dominoes were placed on their edges in the usual manner before the dog, and a like number before me. The dog having a double number, took it up in his mouth and put it in the middle of the table; I placed a corresponding piece on one side; the dog immediately placed another correctly, and so on until all the pieces were engaged. Other six dominoes were given to each, and I intentionally placed a *wrong number. The dog looked surprised, stared very earnestly at me, and at length growled, and finally barked angrily.* Finding that no notice was taken of his remonstrances, *he pushed away the wrong domino with his nose, and took up a suitable one from his own pieces and placed it in its stead.* I then played correctly; the dog followed, and won the game. His play must have been the result of his own observation and judgment, as not the slightest intimation was, or could have been given by Mr. Leonard to his dog.' Mr. Leonard is a gentleman of fortune, and the instruction of his dogs has been taken up merely for his own amusement and diversion. He has found that by inducing the animal to repeat again and again what was required, not only would the dog become capable of performing that specific act, but that part of the brain which was brought into activity by the mental effort, would become more largely developed, and hence a permanent increase of mental power be obtained. The fact is in accordance with the known laws of the physiology of the nervous system.

"Such instances of intelligence might be multiplied to any extent, but it is unnecessary. Every person who has observed the actions of horses, dogs, foxes, and indeed all other animals, must have noticed numerous cases involving the exercise of memory, design, and a perception of the relation between cause and effect; and thus proving that reason, or the power of combination and inferring, is possessed by brutes. The power, it is true, is less perfect than in man, a circumstance we should naturally infer from the greater proportionate volume of brain, and its more perfect arrangement in the latter than in the former; still it may reasonably be inferred, that the difference is only in degree, and not in kind.

"We come to the conclusion then, that the question with which this paper commences should be answered in the affirmative, that brutes do reason. A general belief of this fact would, it is believed, materially change the treatment which they, under the mistaken idea that they were destitute of intellect, have been accustomed to receive from man. Placed by the Creator at the head of 'earth's countless myriads,' man's station is sufficiently elevated and responsible without assuming distinctions, or imputing inferiorities, which do not exist.

"It may not be amiss to remark here, that the question under discussion, has no connection with the duration of mind, or the glorious destinies of man hereafter."

Dunged Wheat.

I HAVE made the following observations with relation to the ears of wheat. In one field there were, for acres together, generally ten chests on a side in an ear; about four of the middle chests on each side containing five grains, viz: two on each side the middle grain, the upper and lower chests falling off gradually to four, three and two grains in each. I went into another field, and could not find more than eight or nine chests in any ear, nor in any of the middle chests more than three grains, viz: one on each side the middle grain, the upper and lower chests falling away to two, and even to one grain each; but this land had been *well dunged.* In another field, it was manifest that the part which had been dunged, did not carry so long and full an ear as the land that had been trodden by the fold and sown after one ploughing; many of these last having ten chests, and five grains in each side of the middle ones. On this occasion I observed the partitions of the chests to open, in order to let out the blossoms; which, when shot forth, they closed again, and the blossom hung on the outside by a single filament as fine as a cobweb. Until I made this discovery, I could not conceive how so fine a thread could thrust out the blossom. I pulled up many of these roots of wheat, and found that some of them had ten tillers or off-sets each. Now if some roots of wheat have ten tillers each, and others but two or three—if some ears of wheat have ten chests of a side, and others but six or seven—if some ears have five grains in a chest and others but two or three, I leave it to be considered what encouragement there is to sow but little land, and see that this is good and in order. The ten-chested ears, at four middle chests each side, with five grains each, make forty grains; and twelve other chests at three grains, make thirty-six—say, seventy-six grains to the ear; while the weak wheat has but twenty-six grains in an ear, and six tillers less; these tillers also, holding but in proportion to the top ears.

LISLE.

HAPPINESS is not in a cottage, nor in a palace, nor in riches, nor in poverty, nor in wisdom, nor in ignorance; nor in active, nor in passive life;—there may be evil, as well as good, in all these. He who possesses Happiness, must *feel* it, in the *mind.*

For the Farmers' Cabinet.

The Dew.

Mr. Editor,—In Col Smith's Essay on the application of lime to soils, see page 337 of the Cabinet, volume 5, there is this observation: "Dews are occasioned by a cool atmosphere coming in contact with the exhalations from the heated earth, or *vice versa;* and hence, a condensation of the aqueous particles: the dew-drop of evening is first seen upon a blade of grass at its highest point." And to this theory many will be quite ready to subscribe. But in a very valuable old work on husbandry, under the head of "Experiments on the growth of seeds," I find the following remarks, which seem to give another view of the case, and to me I must confess, a novel and very interesting one. Will you permit me to copy them for insertion in the Cabinet, and oblige,

An Old Subscriber.

"I had often observed in the spring time, when the blades of barley first began to shoot out of the ground, dewy drops standing on the points of the blades every morning, even when the grass of the field had no dew thereon. This made me believe they proceeded, not from the descending or circumambient vapours of the air, but from juices drawn up by the roots, which passed upwards through the tubes, and issued out at the top; which, according to my conjecture, was true, as appears by the following experiment. I took a pot of fine garden-mould, the earth but moderately moist, and I put into it a quantity of barley, on which, when it had shot up about an inch in height, there appeared at the end of the points, the said pearly drops. These I wiped carefully off, and took up half a dozen of the blades by the roots; then with a pair of scissors I cut off the roots close to the grains of barley, and planted them in the same earth again; but on the tops of these blades, whose fibrous roots I had cut off, not the least moisture appeared the next morning; although on all the others, the same pearly drops had settled as before, and although the amputated blades retained their vigour, through the moisture contained in the earth. This shows, that those watery globules are not collected from the moisture of the outward air, but from the juices drawn up from the roots. I again wiped off the said drops, and within three hours after, found the tops of the perfect blades supplied with fresh drops, which, when they swelled to bursting, trickled down the stalks, and soon again renewed themselves. From hence it appears, that moisture must hold proportion to the roots; and it gave me further occasion of admiring the wisdom of God in this appointment; for, observing that these exudations are, as soon as the sharp-pointed blade appears, continually sent forth, we may ground our judgment on reason and probability, that this moisture immediately begins to discharge itself as soon as the spear is shot through the end of the barley-corn, and which softens the earth upwards, as the blade pushes forward, and facilitates the easy passage of the spear; and from hence, I conjecture it is the same in all the grassy, sharp-pointed plants, for the same reason. The roots of grain and grass terminate in sharp points as they tend *downwards;* and seeing it is thus in the spires which *ascend*, I suspect that there is a continual exudation of a moist liquor from the points of the roots to moisten and soften the earth before them, the more to facilitate the roots penetrating *downwards*, as it assists the blade to push *upwards*."

Common Rain Gage.—"In explanation of the principles on which the rain gage is constructed, and in answer to various inquiries which have been made on the subject, it is proper to observe, that the area of the funnel at the top of the cylinder, in its widest part, being eight times the area of the cylinder below, one inch in depth of rain falling in the open air, and received through the widest part of the funnel, will fill eight inches in depth of the cylinder; and consequently, the moveable rod in the cylinder, being attached to a hollow, floating bulb, will be raised eight inches above the crossbar at the top of the funnel. This space of eight inches, is divided into one hundred equal parts, or small divisions, so that each part or division above the crossbar, will indicate the one-hundreth part of an inch of rain fallen; and one hundred of these parts or divisions, covering eight inches on the rod, will indicate one inch of rain fallen, and must be registered accordingly."

Relief of Choked Cattle.

Messrs. Gaylord & Tucker,—As I was perusing the January Number of the Cultivator, I noticed that your correspondent, J. V., recommended a hickory ramrod, or piston, to relieve choked cattle. I have known cattle killed by the use of such an instrument, it bursting or breaking the pipe. The best method and easiest, is to take a lump of lard (cold,) about the size of a hen's egg, and a spoonful of powder mixed with it, and haul out the tongue and throw it into the throat; let the tongue go back, and they are relieved in one minute. J. Judson.

Albany Cultivator.

The Croton Aqueduct.

THIS stupendous structure is now completed, and in a few weeks, at furthest, the city will have a foretaste of the thousand benefits it is destined to confer. Our citizens may not be generally aware, that in this magnificent work they are surpassing ancient Rome, in one of her proudest boasts. None of the hydraulic structures of that city, in spite of the legions of slaves at her command, equal, in magnitude of design, perfection of detail, and prospective benefits, this aqueduct. The *main trunk* consists of an immense mass of masonry, six feet and a half wide, nine feet high, and forty miles long, formed of walls three feet thick, cemented into solid rock. But this water channel, gigantic as it is, is far from being all the work. The dam across the Croton, which retains the water in a grand reservoir, is a mound of earth and masonry, forty feet high, and seventy feet wide at the bottom, and has connected with it many complicated, but perfect contrivances, to enable the engineer to have complete control over the mighty mass of water. The river, thus thrown back towards its source, will form a lake of five hundred acres, which will retain a supply for emergencies, of some thousand millions of gallons, and also offer, as a collateral advantage, many picturesque sites for country seats, upon the woody points which will jut out into its smooth basin. A tunnel leads the water from this reservoir into the aqueduct, and eleven more of these subterraneous passages occur before reaching Harlem river, having an aggregate length of seven-eighths of a mile, and many of them being cut through the solid rock. At intervals of a mile, ventilators are constructed in the form of towers of white marble, which give to the water that exposure to the atmosphere, without which it becomes vapid and insipid; and these dazzling turrets mark out the line of the aqueduct to the passengers upon the Hudson.

The streams which intersect the line of the structure, are conveyed under it in stone culverts, the extremities of which afford the engineers an opportunity of displaying their architectural taste. Sing-Sing creek, with its deep ravine, is crossed by a bridge of a single eliptical arch of eighty-eight feet span, and a hundred feet above the stream. Its unusually perfect workmanship was proved by its having settled but one inch after the centres were removed. The view of its massive grace from the narrow valley beneath, is one of the most striking points upon the line. Sleepy Hollow, well known to the readers of imaginative lore, is spanned by a series of graceful arches.

The bridge crossing Harlem river, has been the subject of much controversy. The admirers of magnificent symmetry and perfection, and those interested in preserving the navigation of that stream, have warmly advocated the erection of a bridge, over which the water might pass upon its regular level; while the friends of more measured economy recommended a lower and cheaper structure, to which pipes should descend and rise therefrom, after the manner of an inverted syphon. The plan finally adopted, is that of a high bridge, but still with its surface ten feet below the usual grade, which falls fourteen inches to the mile. It is a quarter of a mile long, one hundred and sixteen feet above high water, and its estimated cost exceeds three-quarters of a million. Across this the water is conveyed in huge iron pipes, protected from the frost by a covering of earth, four feet deep. Near Manhattanville, is a tunnel a quarter of a mile long, through the hill at that place; and its valley is crossed by pipes, descending one hundred and five feet. Clendenning Valley is passed at an elevation of forty feet, and arches of appropriate size upon the lines of the streets, leave symmetrical carriage-ways and foot-paths.

We paid a brief visit yesterday to the two great reservoirs of this stupendous aqueduct. The receiving reservoir, at Yorkville, thirty-eight miles from the dam at Croton river, is in two divisions, both covering a space of thirty-five acres, capable of containing one hundred and sixty millions of gallons. It is enclosed by granite walls of solid masonry, roughly finished. The bottom of the basin is the natural soil.

The distributing reservoir at Murray's Hill, in Forty-second street, is a much finer and more expensive work. It is nearly square, and covers an area of about five acres. The bottom is made of puddled clay, as smooth, hard and water-tight as marble itself. This area is 440 feet square at the base, and is divided in the centre by a wall of granite, nineteen feet thick at the bottom, and four at the top. It is surrounded by a wall, also of granite, composed of three distinct columns of solid mason work. The outer column is five feet thick; the second six, and the third, or inner one, a lining of granite, about fifteen inches in depth, placed upon a concrete masonry, above thirty feet thick at the base. From the outside to the middle wall—the thickness of neither included—the distance is fourteen feet; and from the extreme of the outer wall to the inner angle of the third, is sixty feet—the three walls uniting at the top. At a distance of ten feet from each other, are thick cross walls with solid arches, thus binding the whole into one solid, imperishable mass. From the top of the north-east cornice to the level of the street, the distance is fifty-six feet. The depth of the reservoir is forty feet; and it will contain water to the depth of thirty-six feet, or about twenty-two millions of gallons—as computed a few days since by James Renwick, Jr., one of the engineers employed on the work.

At the east end of the division wall, a well has been sunk to the depth of fifty feet, communicating with a sewer below, and forming a waste-wier for the discharge of the surplus water, when it rises in the reservoir above the height of thirty-six feet. At the bottom of the well is laid a block of granite, weighing seven tons; and still further to break the fall of the overflowing stream, and to prevent it from wearing away the stone, water to the depth of six feet rests permanently at the bottom. From the well, the waste water is conveyed by a sewer nearly a mile to the North river.

The style of architecture is Egyptian—well fitted by its heavy and imposing character for a work of such magnitude. The summit of the walls around the whole area, is flagged, and will be provided with a heavy iron railing, forming a beautiful and sightly promenade, twenty feet in width. The grounds immediately around the work have been purchased by the corporation to protect it from encroachments. The receiving and discharging pipes are two in number, each about three feet in diameter. It is now nearly four years since the reservoir was first commenced; and during the working season, on an average, about four hundred men have been constantly employed upon it, besides great numbers employed in the winter season in bringing materials. During the whole time no lives have been lost by accident. Two men had their legs broken by a downfall of the banks—and this is the extent of the injuries that have been sustained. The whole cost will not be far from $500,000.

Such is a condensed but comprehensive view of this noble structure. It is now completed, with the exception of the high bridge. The bridge will occupy two years more, but a temporary pipe has been laid over the river upon the coffer-dams of the bridge, which will afford us a supply of water for two or three years, until the completion of the entire work. Its estimated cost, owing to the changes of plan, rise of labour and provisions, &c., has risen from five to twelve millions—a great sum abstractly considered, but a trifling one compared with the benefits resulting from the work.—*From the New York Tribune.*

For the Farmers' Cabinet.

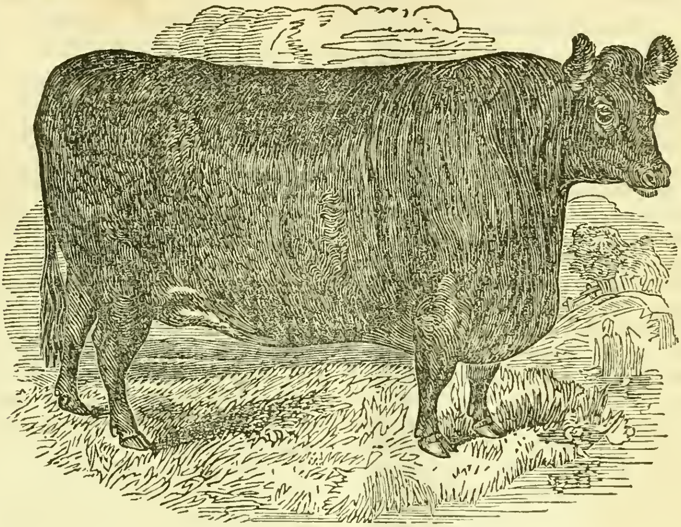
The Electric Fluid.

During the very severe thunder-storm of friday, the 1st of July, a cherry tree of large size, standing within the range of the electric fluid, on the Bristol turnpike road, just beyond the church of All Saints, exhibits ample proof that the injury done, was occasioned, not by what might be termed the *stroke*, but by the expansion of air contained within the body of the tree itself—just in the way that it is now ascertained, the destruction of Natchez was effected by the expansion of air contained in the buildings themselves; and which burst forth, carrying the roofs and walls with it, to supply the vacuum that had been occasioned by the sudden evaporation of the atmosphere above them. The tree abovementioned, is split through the very centre of its trunk, the bark having been blown off on the south and north sides of the tree only, where it now hangs in strips, without showing the least signs of fire; the rent of the body having taken place in these directions, and penetrating through and through the trunk. And the conclusive facts, that the rent was occasioned by the bursting forth of the internal air is, that thin fibres of timber are attached to the opening, all pointing *outwards*, and extending the length of the finger beyond it, yet still adhering to the internal parts of the tree; having been *blown out* by the air which escaped at the instant of the catastrophe. And further, a person who was passing out at an adjoining gate at the time, says he was blown across the turnpike road, against the fence on the opposite side; remarking that the heat he experienced at the instant, was inconceivably great.

Now, this to me, is a new feature in the "Theory of storms and their effects;" and may it not be found to account for many of those remarkable phenomena, which we often witness on examination of the eccentric effects of the electric fluid in its passage to the earth; showing the probability, that the destruction of many of those trees which are said to have been struck by lightning, has been occasioned merely by the violent expansion of internal air, rushing forth to supply the vacuum formed by intense heat, and a sudden evaporation of the atmospheric air around them. Would your valuable correspondent, "Observer," allow us the benefit of his well-tried judgment and experience on this very important subject? possibly to him there may be nothing new in all this.

S. T.

Philadelphia, July 4th, 1842.



THE GALLOWAY HEIFER.

This cut is the portrait of a beautiful heifer, deservedly called "The Queen of Scots," bred by Mr. Nurie, and grazed by Mr. Wright, of Rougham, in Norfolk. The following were her proportions: height of shoulder, 5 feet 2 inches; length from nose to rump, 10 feet 4 inches; width across the hip, 2 feet 6 inches; across the middle of the back, 3 feet; across the shoulders, 2 feet 4 inches; girth of leg below the knee, 8 inches; distance of breast from the ground, 1 foot 3½ inches; width between the fore-legs, 1 foot 5 inches. The weight was 190 stones, of 8 pounds, or 1520 pounds. She was exhibited at the Smithfield cattle show, and her portrait engraved under the sanction of the club.

The Galloway cattle are straight and broad in the back, and nearly level from the head to the rump; round in the ribs, and also between the shoulders and the ribs, and the ribs and the loins, and broad in the loin, without large projecting hook bones. In roundness of barrel and fulness of ribs, they will compare with any breed, and also in the proportion which the loins bear to the hook bones or protuberances of the ribs. The Reverend Mr. Smith, the author of the Survey of Galloway, says, "When viewed from above, the whole body appears beautifully rounded, like the longitudinal section of a roller." They are long in the quarters and ribs, and deep in the chest, but not broad in the twist. The slightest inspection will show that there is less space between the hook, or hip bones and the ribs, than in most other breeds—a consideration of much importance; for the advantage of length of carcass, consists in the animal being well ribbed home, or as little space as possible lost in the flank. The Galloway is short in the leg, and moderately firm in the shank-bones; the happy medium seems to be preserved in the leg, which secures hardihood and a disposition to fatten. With the same cleanliness and shortness of shank, there is no breed so large and muscular above the knee, while there is more room for the deep, broad and capacious chest. He is clean, but not fine and slender, and well proportioned in the neck and chaps—a thin and delicate neck would not correspond with the broad shoulders, deep chest, and close, compact form of the breed; the neck of the Galloway bull is thick, almost to a fault; the head rather heavy, the eyes not prominent, the ears large, rough, and full of long hairs on the inside. The skin of the Galloway is loose, mellow, and clothed with long, soft, silky hair; thinner than that of the Leicestershire, but not so fine as that of the hide of the improved Durham breed; but it handles soft and kindly: even on the moor-land farms, where the cattle, during the greater part of winter, are fed on the scantiest fare, it is remarkable how little their hides indicate the privations they endure.

For the Farmers' Cabinet.

Good Example.

At page 255 of the Cabinet, volume 6, there is a very interesting paper on the value of a single example of good farming to a whole neighbourhood. The subject has been brought forcibly to my mind by a visit to the farm of the late and very justly lamented Mr. George Walker, of Holmesburg, where I witnessed by far the best ploughing that I have anywhere seen. To be sure it was on land that had just grown a crop of millet, for which crop I remember Mr. Walker was famous; and the grass had been mown according to the old farmer's direction, to his men, when he said, "leave the top standing if you will, it is the bottom half inch which I want;" on land without a weed or stone, and which had been thoroughly pulverized for so many years, that even on a soil by no means naturally *happy*, it broke up like an ash-heap, leaving the surface about as level as the top of a table, the effect of a narrow, deep and well turned furrow; which it was a caution to behold. I have often heard that in some parts of England, where it has long been the custom to encourage the art of ploughing, by setting apart days for public exhibition, and the award of premiums, the ploughmen have at length become so expert, that they can throw a furrow so straight, as to enable any one upon laying his head in one end of it, to see right out at the other end; and this in a furrow a quarter of a mile long! but have always considered the story a little on the hyperbole: here, however, in a furrow about one hundred yards in length, the same might have been done, for I do not believe, on measurement, that the furrow would be found to deviate two inches from a perfectly straight line. And then, the headlands first ploughed, upon which the horses turn out, continuing the furrow up to the line, with not so much as an inch of land unturned; this, with a full and decided setting in, left the reaches so nicely formed, as to be in appearance, like well made *beds*, the headlands forming the *pillows*. Here I witnessed a perfect system of tillage and cultivation, with its attendant advantages—a level surface and a clean and thoroughly pulverized soil; and some of our friends will be surprised when I detail the mode about to be adopted to fit this already well-broken, garden-like mould, for the reception of a crop of ruta-baga. As soon as the land is ploughed, it is to be well rolled and repeatedly harrowed; then the ridges are to be struck with one bout of the plough, and these are to be rolled on their tops, on which the seed is to be drilled. "What a labour!" I hear some one exclaim, "And what is to pay for it?" I answer, "the present and future crops, and the saving of after tillage."

Now, in this picture of improved husbandry, I see the hand of "the master" who introduced it on the spot where it is now so perfectly practised; and who, "although dead, yet speaketh" in the elegant arrangement of the pleasure-grounds and gardens, the well devised plantations, and the thorough system of cultivation, upon which so much depends the *quality* of the crop, and for which the late Mr. Walker was known to be, what is commonly termed *fortunate*. Upon the whole farm there are no cross fences, the land forming one enclosure, laid off in sections; by which much expense is saved and land gained, and on which a perfect system of soiling might be adopted.

But, how much of the beauty and loveliness of the present state of this establishment is attributable to female influence! it is only necessary to visit it to be convinced of this fact; and during my short stay, I was continually reminded of the last Dialogue between Frank and his Father, page 25, volume 5, of Cabinet, where Frank attributes to his sister Susan's management the superiority of her garden, and innocently remarks, that "all she does is with the fingers, while his is done by the rule of thumb;" and declares he fancies that he perceives a difference in the fragrance of Susan's flowers, when compared with his; and certainly, that they continue longer in bloom: while his father admits that it is not in his power to imitate his sister in the delicate and gentle manner in which she rears her tender charge, raising their drooping heads, looking them in the face, and calling them "my beauties."

But I owe an act of justice to the young man, whose *elegant* style of ploughing has called forth this very pleasant reminiscence. His name is Gilbert Wagner, and if I mistake not, he is one who is destined to become "an example to a whole neighbourhood." Vir.

July 23d, 1842.

Liquid Manure.—"Although from the writings of agricultural chemists, it has been proved that one pound of urine will produce a pound of wheat, how seldom do we see it preserved at all! A writer calculates, that as much manure is lost in the escape of urine, as would, if properly applied, have an effect equal to the whole of the lime, the rape-dust and the bones that are used throughout England!"

For the Farmers' Cabinet.

"Sandy Point."

I HAVE been a good deal interested in looking over several letters in the Farmers' Register, in which the writer, A. Nicol, gives a "few memoranda," connected with the management of a considerable estate in Virginia. His first letter dates from "Sandy Point, March 17th, 1841." He is the general superintendent of an estate belonging to Robert B. Bolling, Esq., lying in the lower end of Charles' City county, Virginia; stretching along the James' river, for more than six miles, and containing about 8000 acres, nearly 2400 of which, are under cultivation. This letter states that "the whole of the soil is susceptible of the highest improvement," and wherever *lime* has been applied, the benefits resulting from it, have been very decided. The average crops for the last ten years, have been 5000 bushels of wheat, and 10,000 bushels of corn. About ninety slaves, nearly equally divided, as regards the sexes, are employed in agricultural labour. Seven carpenters, two blacksmiths, two sawyers, one weaver, one sick nurse, and nine old and infirm men and women, employed chiefly in spinning, winding, knitting, making baskets, horse collars, &c., may be added to the effective, labouring force of the farm. They are said to be comfortably lodged and clothed, and well fed; an ample allowance of meal, and half a pound of bacon, or its equivalent in beef, or fish, being daily cooked for each hand, together with a plentiful supply of seasonable vegetables. A hospital is kept for the accommodation of the sick, where there is a careful nurse to attend them. Thirty-eight horses and mules, and thirty-eight yoke of oxen are kept for farming purposes. Thirty cows, thirty-seven young cattle, something more than one hundred sheep and two hundred hogs, help to make up the stock of the farm. The general character of the cattle and sheep is inferior.

The land under cultivation, 2372 acres, is in four divisions: 1st. The Neck, or lower farm, of 600 acres. 2nd. Teddington farm, of 700 acres. 3d. Upper quarter farm, of 536 acres. And 4th. The Rowe farm also, of 536 acres. These divisions, till the early part of 1840, were under the management of separate overseers: since that time they have been united, under the care of A. Nicol, who says in the June number, 1841, "The estate will in future be cultivated as follows: the Rowe farm, of 536 acres; the Neck farm, of 600 acres; and 600 of Teddington, will each form one field, cultivated on the three shift system, of corn, wheat, clover: 100 acres of the Teddington farm, divided into five fields, will continue to be cultivated on the five shift system of wheat, clover, corn, wheat, clover; or one 20 acre lot in corn each year. The Upper quarter farm, of 536 acres, will be divided into four fields of nearly equal area, (134 acres,) to be cultivated in, 1st. wheat; 2nd. corn; 3d. wheat; 4th. clover—or one half in wheat, one fourth in corn, and one fourth in clover each year. Under this system, in 1842, all of the Rowe farm, of 536 acres, will be in corn, together with 134 acres, or one fourth of Upper quarter, and one 20 acre lot on Teddington. To this, will also be added, 30 acres of adjoining, and more recently reclaimed land, on Teddington, in all 720 acres. In 1843, the corn crop will comprise all of the Neck farm, of 600 acres; 134 acres of Upper quarter, and one 20 acre lot on Teddington, in all 754 acres. In 1844, the corn crop will comprise 600 acres of Teddington, together with one 20 acre lot, and 134 acres on Upper quarter, also equal to 754 acres. In each of these years, all the corn land will be sown in wheat, or oats, together with 134 acres, or one fourth of Upper quarter, after clover fallow, and one 20 acre lot on Teddington, also after clover fallow. In order to prepare the Upper quarter farm for the intended four shift system, one fourth of it, now in wheat, is sown in clover, for fallow in 1842, and the fourth of it, which comes into fallow this season, 1841, has a portion of it sown in oats; the remainder to be sown in peas, both intended to be ploughed under, as preparatory manuring. There will constantly be three different rotations on the estate—a three shift of corn, wheat, clover,—a four shift of wheat, corn, wheat, clover; and a five shift of corn, wheat, clover, wheat, clover. These various shifts are not adopted in consequence of any particular difference of soil, but more especially for ascertaining from actual results, on soils as nearly alike as possible, which of the rotations will eventually be the most profitable." On so extensive an estate, the profits resulting from different rotations, are subjects of very important inquiry. And indeed, not only where the operations are on so large a scale, is the rotation of crops important, but also on our small farms, of one, two, or three hundred acres. The five field system, of corn, oats, wheat, or rye, and then grass for two years, has been for some time in general favour among our farmers in Pennsylvania and Jersey. But the crops of wheat and rye have latterly been so precarious, that I think we shall watch with very considerable interest, the experiments at "Sandy Point." They will, at any rate, remind us, that it is worth while to inquire if any other routine may advantageously be substituted for the one just mentioned.

"To complete the junction of the horse teams on the estate, since the new arrangement, Mr. Bolling has had a stable recently fitted up," with accommodations for forty horses. It is under the care of an old man and boy, whose business is to keep it thoroughly cleaned out and littered, as well as to have the horses fed, so that when the drivers come in at night, they have only to unharness, and clean down their respective teams. Materials were in preparation in the spring of 1841, for the erection of stabling for the accommodation of the working oxen; they having been heretofore kept after the general mode adopted, as the writer says, "in lower Virginia;" and might he not with too much correctness, have added, "in Pennsylvania and Jersey!" That is, after their day's work was done, they were turned into the yard, where their provender was scattered, for them to gather up, as best they might, or trample under foot, as a great deal of it, they ever must. The patience, the endurance, and the hard toil of the ox, deserve the kindness of his master; whose interests, we are persuaded, would be consulted by affording him the protection to which he is fairly entitled. There would be a saving of food, as well as a thrift and healthfulness in the beast, that would amply compensate, for the small extra expense and care, necessary to give him merely his due. When the yoke is replaced on his neck in the morning, how can the owner look in the quiet face of his ox, and recollect that last night, when he was released, he was turned into the barn-yard, unprotected from the snow, the hail and the wind, from the effects of which, he is now shivering all over, while the "tender mercies" of the master, are directing the gad that knocks the suspended icicles from his body! On the estate in question, it is anticipated that by increased attention to the housing, and keep of the working oxen, their efficiency will be materially promoted, and thereby a considerable reduction in the number necessary, may be effected.

By the new arrangements in relation to the former divisions of the estate, ten miles of fencing, with pine rails, will be spared, at an annual saving of more than $700.

Should this passing notice of the active and intelligent correspondent of the Register, serve to interest the readers of the Cabinet, I may probably recur again to some of his subsequent communications.

In the neighbourhood of Philadelphia, our farming establishments are on so small a scale, that I have partly concluded it might not be entirely a mal-appropriation of the Cabinet's pages, to occupy a little space, in showing how they do things in the "Old Dominion." Z. Y.

For the Farmers' Cabinet.

Butter.

I live in the good city of Philadelphia, and have been surprised as well as chagrined, at the small quantity of good firkin, or tub butter, that comes to this market in the winter. Every house-wife must nauseate the *grease*, that herself can hardly find it in her conscience to use, and which makes her husband turn up his nose at the table as if his good lady had been *eating snuff!* And yet this miserable stuff was almost exclusively, in our market last winter: it was, as every one knows, exceedingly difficult to procure a keg of *good* butter. And why should it be so? Can the boasted green fields of Pennsylvania, Jersey and Ohio, afford no nutriment, that the cow can prepare for *good* butter? Or is the fault in the management of the dairy? My *judgment* awards the fault to the *latter*, though my *choice* would give it to the former; for I have believed my countrywomen capable of doing *well*, anything they undertake. And why should the farmer be contented to lose so much in the price of his butter? It takes no more milk to make a pound of good, than of bad butter—and it requires no more horse flesh, or steam power, to bring a keg of the *real article* to market, than one that can barely be sold for cart grease! Last winter, good keg butter, when such a thing *happened* to be in the market, readily brought 22 cents, while thousands of kegs, would hardly find sale at 12! Now here is a difference of 10 cents per pound, which it seems to me, might just as well be put in the farmer's pocket, if his "better half" could be persuaded to study her "art." And what a deal of ill humour, we in this city of brotherly love, would be spared:—of all things I dislike to feel sour.

I once had a great aunt, of whom it might almost be said, she "knew to wield the sickle, scythe and plough;" and I have many times heard her say, that if butter is not well worked after it is taken from the churn, it is impossible that it should keep well. When the operation of the ladle ceases to bring out the buttermilk, it should be *properly* salted, and set away till next morning, when it should be again *thoroughly*—aye thoroughly—thoroughly worked with the pressure of the ladle, till no milk is to be seen. Now, Mr. Editor, you need not smile that I, who know so much more about *using*, than *making* butter, should undertake to advise! but indeed its a *grave* subject.

A writer in the Central New York Farmer, gives the following directions, which may possibly be of some use.

"In packing butter, the firkin should be seasoned for at least a week previous to using it, by filling it frequently with buttermilk, and afterwards properly cleansed and scalded. The butter should be put down as soon as the second working is finished, while it is yet soft and pliable, pressing it together in such a manner as to leave no vacancies between the churnings. If the butter is intended to be kept for any length of time, the following treatment will answer the double purpose of excluding the air, and supplying the proper pickle, which are both necessary. Cover the butter neatly with a linen cloth, over which lay a quantity of fine salt, and add half a pint or so of clear water—repeat either or both when necessary, and set it in a cool, dry cellar."

I want some of your readers, who are competent, to take hold of this subject and treat it as it deserves. If this shall draw something from those who are qualified to direct in the premises, the end will be answered of

Sarah F.

For the Farmers' Cabinet.

Smut in Wheat.—Durham Cattle.

"An old fashioned farmer of some experience, far advanced in years," and who dates from "Roxburgh, in Scotland," in a letter to the "Cultivator," says, "it should be borne in mind that smut is a very infectious disease; and wheat seed, even after it is pickled, should not be spread out to dry upon a floor, upon which smutted wheat had previously been threshed. Neither should it be put into smut tainted sacks, for the purpose of carrying to the field."

He says he has "several times tried the experiment of inoculating seed-wheat with smut, after the seed had been pickled, limed, and dried for sowing, by taking a sample of it in his hand, and rubbing it with the powder of smut balls, then sowing it apart from the other. The result was, in every instance, smut in the produce of the inoculated samples, and none in the produce of the bulk from which they were taken. Smut is also sometimes taken to the field in unfermented dung, made from the straw of smutted wheat, of the former year's growth."

The same writer further says, "Some of your correspondents affirm, that cows of the improved *Durham* breed, here called 'high bred,' or 'well bred,' are great milkers They are not so esteemed in this country. There, no doubt, are exceptions to the general rule. We consider the superior excellence of high bred Durhams, to rest upon their *fine shape*, *great size*, *early maturity*, and *aptitude to fatten*. In these points, there is no other known breed equal to them. It is too much to claim for them also, the palm in milking. Their character stands justly high, independent of that desirable qualification. But I must say, I think the *quality* of beef of the Hereford breed, is superior to the Durhams; and the beef of the polled Galloway Scots, superior to either, as is proved by the London market, where Galloways sell from a halfpenny, to a penny per pound, higher than any other breed.

Cows of the old Yorkshire breed of short horns, are generally good milkers. They, as well as high bred Durhams, require rich pasture in summer, and to be well fed in winter. Crosses between well bred Durham bulls and coarse short horn cows, generally produce useful animals, and will go on for several generations without deteriorating. Crosses between cattle of distinctly different characters, is not commendable. They soon degenerate.

The Ayreshires are a diminutive variety of short horns. They are in great repute as milkers, and are fast spreading over these islands. They are in every sense, "the poor man's cow." They thrive and give a good portion of milk, upon *very short commons*, where larger breeds would starve.

Lard Oil.—This is a new item in the domestic manufactures of the West. At Cincinnati, there are now in operation three factories, which consume daily from twelve to twenty barrels of lard. The oil, it is stated in the Cincinnati Republican, has already attained a high degree of excellence and popularity, and is not only used extensively there, but it is shipped to the East every week: thus completely changing the course of the oil trade. It is used for machinery on the Little Miami rail-road, in all the city works, at the hospital and asylum, in several of the churches, and in numerous stores and dwellings. It is very obvious that this new manufacture will be of the greatest importance to Cincinnati, and to the West generally.—*From a Western paper.*

"Ignorance and apathy are no longer the characteristics of the guardians of the soil—the lamps of science shed their light over the once dreary waste, and in it the *statesman* sows the seeds of national independence and prosperity, and the philosopher finds food for the mind."

For the Farmers' Cabinet.

Profitable Hiring.

In these times of difficulty and embarrassment, when the farmer scarcely knows what to do with the surplus produce of his fields; when taxes are threatening to accumulate upon us, and the means of paying them are withering on every side; it is an important inquiry whether we have yet found the cheapest methods of cultivating our farms. The state of Pennsylvania is now nearly forty millions in debt. The interest of this sum constitutes a heavy draft on the resources of the commonwealth. If we can find a method of retrenching the expense to that amount, without diminishing the productions of our farms, we escape the disgrace of repudiation, and yet retain the enjoyments which our land has been accustomed to supply.

On most farms of any considerable extent, one or more hired men are usually employed. These men are commonly engaged to work against time. Their wages are not dependent upon the quantity of work performed, but upon the time employed in performing it. In hiring our agricultural labourers, we pay them for the physical force, rather than the intellect, which is supplied. We do not expect that they will devote much thought to their business. They are required to receive their directions from their employers, and to conform to those directions, whether they are judicious or not.

Now we must agree that the intellect is the better part, or, as our farmers would say, the larger half, of a man. A man who is employing his own powers for his own benefit, generally finds the contriving mind quite as efficient as the performing hand. And the hand itself will actually perform much more in a given time, when urged by an energetic mind, than when the intellect is languid or dormant.

It is no uncharitable charge on the labouring class, to repeat what has been often said, that the difference between working by the day, and working by the job, is strongly marked in the quantity performed. There are probably few of us who fully appreciate the energy infused into the limbs, by a mind stimulated by interest, to the execution of a maximum amount of labour. It would perhaps not be unsafe to assert, that a man thus stimulated can perform, without injury, an amount which would be fatal if extorted by compulsion.

Besides this, we may remember, that interest is Argus-eyed. The man who has a direct interest in the proceeds of his labour, can see many things which ought to be done, and which may be done at very little expense of time, which the mere hireling does not see, because he is not looking for them. Probably few men have had much to do with hirelings, without having occasion to wonder at the stupidity of men whose intellects perhaps were very little inferior to their own.

As the mind acquires strength and facility by exercise, in whatever way it is employed, it is evidently important that as large a part of the community as possible should be trained to such habits of thought and action, as tend to develope the resources of the country and to preserve from waste, whatever our fields and workshops are capable of producing. Hence it seems to be undeniable, that the earlier and more extensively the labouring class, the very bone and sinew of the community, can be engaged in a manner to feel that they have a direct interest in the results of their toil, the more prosperous and wealthy we may reasonably expect to become.

The practical result to which this reasoning leads, would be an effort on the part of proprietors, whether of farms or workshops, and particularly of farms, to regulate their business in such manner that the operators should have a direct interest in the produce of their labour; and thus become the manufacturers of their own fortunes.

Having sufficiently indicated the principles, I shall leave the details to the sagacity of my readers.

A Pennsylvania Farmer.

For the Farmers' Cabinet.

The One-horse Subsoil Plough.

Sir,—I am an advocate for the use of the subsoil plough, but believe, as a correspondent in your last number expresses, that the system is destined to receive, through the mismanagement of its friends, a woful discomfiture. How is it, Mr. Editor, that so many of us still believe that a *saving of expense*, is of itself a *gain?* It is, generally speaking, a *loss* in the hands of a judicious cultivator—the man who is not afraid to trust the management of his capital to his land: and in no instance will the error be more prematurely developed, than in the highly important operation of subsoiling—the inquiry after a one-horse subsoil plough, being quite decisive on that point. I know not how it is, that even sensible men are so easily led astray by such fallacies; it was but the other day that a first-rate cultivator of the soil inquired, while I was describing the "modus operandi" of the improvement, and detailing its advantages to soils such as his, which are rather thin and wet, whether it would not be found an expensive business, it being literally, a double ploughing? To which I could but reply, "yes, but the crops will pay all that," and again enjoined upon him the maxim, "I care not what I give for an article, the only question is, what can I sell it for?"

To the European cultivator it will sound strange, to be told that we grudge the use of a pair of horses only, in the stirring of the subsoil! To be able to do it with so small a force, will be cause of wonder to them, and speak volumes for the soil and climate of our country; but the wish to obtain any good from the use of a *single-horse* plough, will appear to those who do not expect to accomplish the end with less than four, and often with six, or even eight, the height of folly, and a saving at the wrong end. And although it is readily admitted, that more improvement has taken place within a few years past, in the formation of our ploughs, than in any other implement; yet there is a point beyond which, *alteration* ceases to be *improvement;* and it is generally believed we have overstepped that point in the introduction of the subsoil plough for almost every kind of work—just as it is at length discovered, that the heavier, in reason, the construction of machinery, the steadier, and therefore the easier it will be found to work. To be sure, we are amused when we read the accounts of the great number of horses and oxen that it was thought necessary to attach to their ploughs in former days, and are, with some justification, inclined to ask in these cases, whether the operation must not have been "expensive;" indeed wondering how any crop could be made to pay it; and yet it has been found to pay, in a country, too, where the charge upon the agriculturist in the shape of duties, taxes, poor-rates and tithes, in addition to high rents, would be considered, in this country, absolutely insupportable. I copy from an old but very interesting work on husbandry the following observations, for the amusement of your readers; remarking, however, after all, there might not be so great a distance between this system, and that which is about to be introduced amongst us in the shape of a *one-horse subsoil plough*, if it be true that "extremes meet."

"My carter says, in ploughing stiff land it is cheaper to use six horses in the plough than four, and a farmer standing by, said the same thing. I summer-fallowed for barley, and used but four horses, but the land being dry and hard they made but slow riddance, the ploughman being obliged to *wriggle* the plough to help the horses, whereas six horses would have gone through *thick and thin;* so note, for the future I use six horses. An advantage of ploughing with oxen is, that you may summer-fallow the strongest lands in the driest seasons (their chains being strong,) by making a plough of *ten* oxen and adding an extra ploughman the more, to hold down the plough; whereas, if at such a time you make a plough of *eight* horses, they will not carry so true a furrow, and will break their harness."

Now this account must appear very amusing to your readers, yet not more so, than the breaking up a subsoil with a single horse, will astonish the natives of those countries, where, to use *four* horses only, is to give the ploughman the task to "wriggle the plough to help the team!" John Mead.

June 28, 1842.

To the Editor of the Farmers' Cabinet.

Agricultural Societies.

Sir,—Among the many useful purposes to which agricultural societies may serve as the most efficient means, is that of effecting an interchange of seed, so that the best seed from the best quarters may always be at the command of the agriculturist. That the seed of most cultivated plants degenerates if sown for a series of years in the same soil, is well known. Some ten years ago, a farmer in Chester county, of my acquaintance, received a bag of Genesee wheat. It was sown, and the product preserved for seed. For several successive years the crop was abundant and superior in quality. It afterwards degenerated, probably became mixed, and lost its superiority. It is unnecessary to adduce facts or arguments to prove the advantages of a change of seed. Farmers are in the habit of seeking change, but they seldom go out of their own neighbourhood. It is proposed, through the agency of agricultural societies, to extend these advantages. The crops of rye for ten years past have failed in this country; perhaps had good seed been imported and substituted for the miserable sample raised at home, this evil had long ago been avoided.

Will the corresponding secretaries of the various societies take up the subject? And will you, Mr. Editor, favour us with a list of the various societies within your knowledge, with their secretaries, as far as you may learn them? S.

There are in the world a set of men who know enough already, and cannot recollect the time when they did not: such men will never know anything as they ought to know it. I would as soon undertake to bale out the ocean with a clam-shell, as to attempt the improvement of such men.—*Bates.*

For the Farmers' Cabinet.

On Ploughing Corn.

I have before me twelve acres of corn, the whole cleaning of which has been confined to a single ploughing with the Prouty plough, one furrow being turned *from* the rows into the space, where it has lain, in the hope of a seasonable working with the cultivator; but alas, that chance has never been afforded, the incessantly wet weather preventing it, until the corn had reached a height which entirely precluded it,—what will be the consequence! To be sure, there are weeds amongst it, but not so many as I had expected; the ploughing *from* the rows being also about as bad an arrangement as could have been devised; the returning of them *to* the rows having been found impossible in proper season. The crop must therefore go on its own hook; and although I sincerely regret the very miserable way in which I have been compelled to neglect it, yet I assure you it is very fine, tall and stout as any that I have ever grown, and is splendidly tasseled; a far better crop than that in the adjoining field belonging to my indefatigable neighbour Clifton, whom I often saw cultivating it when the earth was full of water, and when the furrows turned over like mortar. As I had been prevented from putting my intentions into practice—which were, merely to throw a furrow from each row into the interval, there to lie for a season, and then to return them to the rows as a last tending, (believing that I had sometimes been guilty of over-working my corn, to its injury)—I must now await the result of an extreme case of the paucity of management, which I by no means approve, although present appearances are not discouraging.

But I ought to say my land—a two years' old lay—was broken up very deep and carefully last autumn; and early in the spring it was cross-ploughed to the full depth, the sward turning up perfectly decomposed and the whole harrowing finely; and to this management I owe freedom from cut-worm in the spring, and the comparative clean state of the land, as also its lightness; for if it had not been ploughed until the time of sowing, it must have been worked in wet weather, as my neighbour's was. I hope another year to improve upon this hint afforded me by "stern necessity." P. J.

Berks County, July 20, 1842.

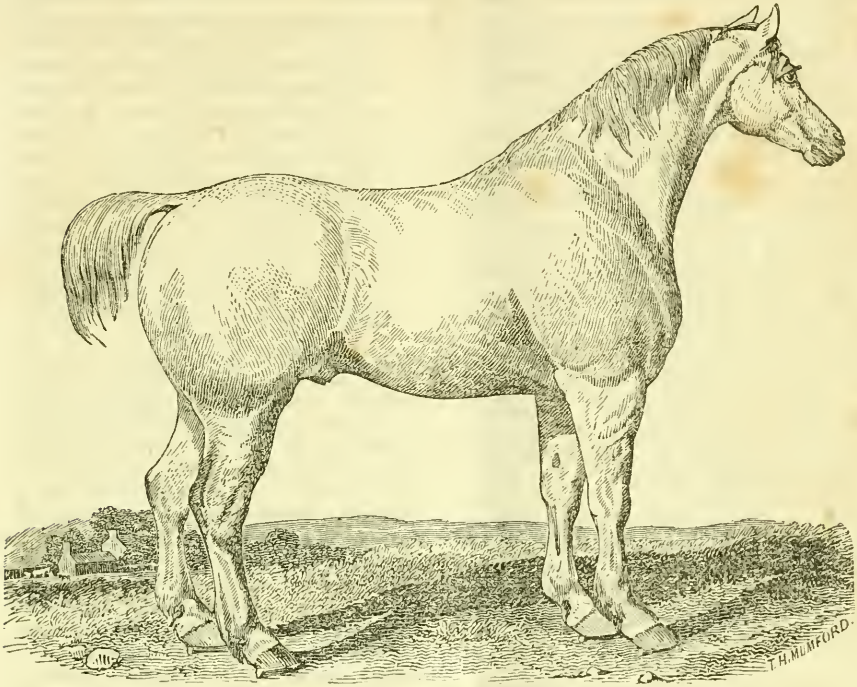
Henceforward, the prospects of agriculture are the prospects of science; and its future progress will be the progress of universal knowledge!

Subsoiling, Draining, and Irrigation in England.

The advantageous effects of draining upon wet soils, must be just as great as the injurious effects of too much water; while the good effects of irrigation and warping—both, merely systems of applying weak liquid manure in large quantities—and of the subsoil plough, as an instrument by which the water is permitted to diffuse itself more generally through, and the atmosphere to act upon the tenacious subsoil, so as to make a change, as it were, in the general character of the component parts of the soil, may be philosophically demonstrated; but this is unnecessary, for we have the proof positive in millions of acres before our eyes. Thus the fens of Lincolnshire, Huntingdon, and Cambridgeshire, which 50 years ago were stagnant marshes, are now luxuriant pastures. 200,000 acres of the Lincolnshire fens have thus been reclaimed, and in other counties many thousands more, while 25,000 acres of the single fen of Deeping are drained by two steam-engines of 60 and 80 horse power. Chat Moss, a yawning morass in 1820, is now a golden grain-field with incipient villas; while the several statements of Messrs. Denison, Craft, Graham, &c., exhibit a change from sterility to fertility, and afford practical evidence of the value of the permanent improvements produced by draining, warping, irrigation and subsoil ploughing, which are really illustrations of what these operations are doing for all; the general results being, that wheat in these counties is no longer a luxury confined to the rich—it is now the staff of the poor man's strength—the quaking morass and the arid moor, now wave with the golden grain, and the acre which once gave back only four times the seed, now returns from eight to ten-fold. Instead, too, of winter being the season of starvation to cattle—when *existence* was all that could be hoped for—it is now essentially the season for fat and plenty; for if the turnip cultivation has given to the grazier the power of increasing the *quantity*, the skill of the breeder has equally increased the *quality* of his stock, and this is seen in the weight of cattle and sheep exhibited at Smithfield market, at three different periods, viz.

1810, average weight of cattle, 26 st. 6 lbs.—sheep and lambs, 2 st. each.
1830, average weight of cattle, 39 st. 4 lbs.—sheep and lambs, 3 st. 8 lbs.
1840, average weight of cattle, 46 st. 12 lbs.—sheep and lambs, 6 st. 6 lbs.

Such, then, is a brief glance at the progress of this branch of agriculture.—*Hannum.*



DRAUGHT HORSE;

The property of Messrs. Hovey, Edinburgh; painted by Landseer; engraved by Mumford, from "The Book of the Farm."

EDEN-HILL FARM INSTITUTE,

On the river Delaware, twelve miles above Philadelphia, eight miles from Bristol.

The Editor of the *Farmers' Cabinet*, takes the opportunity of stating to its numerous readers and his personal friends, that being relieved in a considerable degree from the details of the office, by an arrangement with its present proprietor, he is enabled to realize his long cherished desire, to practise the art of agriculture in this, "the land of his adoption." To this end, he has connected himself with Joseph Cowperthwait, Esq., upon whose farm, in every respect adapted to the purpose, he proposes to establish an Institution, for the reception and instruction of young men in the principles and practice of Agriculture and Horticulture. He will occupy the elegant mansion, now in the tenure of P. L. Laguerenne, Esq., which, for healthfulness and beauty of situation, cannot be surpassed; and it will be the study of himself and family to tender to their young friends the conveniences and comforts of a HOME.

The exercises of the Institution will embrace the practice of Agriculture in all its various branches and details—the cultivation of the best crops, and the rearing of the choicest live-stock—the best animals having been selected, and the most approved implements obtained. The management of the plough will form a leading feature in the course of instruction—sub-soiling will be adopted on a regular scale, as well as a system of draining, the formation and application of composts, &c. Horticulture will occupy a large share of attention, the students having the advantage of studying and practising this branch—the care of the flower garden, green-house, and culture of the vine, under a professed gardener, having the charge of a range of houses, with an enclosed garden, of more than two acres in extent.

The estate is bounded on the west by the Bristol turnpike; on which, and within its borders, is situated the Episcopal church of "All Saints," with several other places of worship in the vicinity. The Trenton and New York rail-road passes through the centre of the farm; while the river Delaware, its easternmost boundary, affords repeated daily access by steam-boats—a boat in regular attendance at Risdon's ferry, landing passengers within a few yards of the line.

A limited number of students only can be accommodated; and as it is the wish of the subscriber to commence operations early in the autumn—the commencement of the agricultural year—he would be happy to receive early applications from those parents and guardians who may honour him with their confidence.

JAMES PEDDER, *Office Farmers' Cabinet, No.* 50, *N. Fourth Street.*

☞ References will be given and required.

***Philadelphia*, *July* 29*th*, 1842.**

For the Farmers' Cabinet.

Running Commentaries on the July Number of the Farmers' Cabinet.

BY A DESULTORY READER.

1. Charles Squarey's Treatise on Agricultural Chemistry—as to *the Substances that enter into the composition of Plants.*—"These he considers as four, viz.—*carbon, hydrogen, nitrogen,* and *oxygen.*" Now, Mr. Editor, you may dwell upon the auspicious results of applying science, and especially chemistry, to agriculture, until doomsday, but you will never do *general service* to your readers until the terms employed are reduced, by no matter how much circumlocution, *to plain English,* if such a thing be possible—is it? The moment a plain farmer who has not studied Latin and Greek, from which those terms are chiefly derived, and who has not gone through a course of chemistry—the moment, I say, such a reader comes to *carbon, hydrogen, nitrogen, oxygen, soda, silex,* and *ammonia,* with many others equally Greek—to men of plain, common, English education—that moment such a farmer or plain reader will "skip," and go on to the *next article,* which is

THE COMPOST-YARD.

The great obstacle to the formation of compost-heaps in this country, as it is to almost all other agricultural improvements, is *the scarcity and dearness of labour;*—nevertheless, collections of large quantities of compost is practised to greater extent and more systematically, in Talbot county, Maryland, and especially, be it observed, among gentlemen who there compose a society for agricultural *converzationes,* than any where else that I know of, in a slave-holding state among large landholders. Some of these gentlemen contrive to collect and haul out 3,000 loads in a year. If one of them would write a plain description, the *time, the how, and the where and the with what,* it is done, he would render a service which would entitle him to the thanks of his brother farmers. In the meantime I pass to the next article, on

FIELD-MICE.

This communication is interesting, because it discloses, in the writer, a habit of reading, the love of which is the most pregnant and cheapest source of happiness that education can throw in the way of any mortal man, and especially a *country*-man; but there are in this communication, signed John Taney, two very common defects:

1. He does not give his *locality,* which ought always to be done, for reasons of utility, too obvious to be mentioned. 2. He is not sufficiently exact in the description of his mouse-trap! No error is so common among writers as *looseness of description* and omission of *dates and localities,* to show the season and climate when and where, the thing related was done, or took place. Beg your correspondents to correct this careless habit. It arises from the inconsiderate presumption that the reader already knows more than he does, or that things and facts which are really important to make the information complete, are not so esteemed by the writer. We are told to use a *small quantity* of this, and a *few of that*—or, as the witness said in an assault and battery case, in court, that Tom had knocked down Dick with a stone, "as big, may it please your honour, as a piece of chalk!" The small quantity, and the few days, should *be always specified!* So much for Mr. Taney, who I followed to the end and was entertained, though I believe and hope it will be a long time before our people will be seen setting traps for catching ground-mice—as to *moles,* is it settled, that they do more harm than good?

Now, in regard to Renovation—the *heading* of a paper should be made more descriptive of its *contents*—so that if these have no attraction for the reader, he may pass on, without stopping to read a considerable portion of the article before he can discover what this "renovation" means. A brief synopsis of the contents, in the heading of essays, is convenient and useful. In reference to the cultivation of the *vine,* the first reflection which strikes the reader, is the *disgrace* which attaches to ninety-nine out of a hundred farmers—that they are too *inert* to provide such a cheap and wholesome luxury as a bunch of grapes, for their family, or friends, when they visit them: but as to the fertility of a vineyard being kept up entirely by *burying its own cuttings,* I have my doubts. Could a cow live alone by sucking herself? even though she took all her own milk? Whereas in the case of the grape-vine, we take, in the grapes, the cream of the produce—doubtless more of the nourishment absorbed by the vine as to maturing the grape, than to the formation of the cuttings. However, the hints are important, especially the remarks of "Another Poor Man," quoted by a Vine-Dresser—who, again, omits *his locality,* though in this case the whereabouts is not so important. But as a general rule, the place where a thing is written, especially where practices and results are detailed, should always be given. The next article is headed

MAGNIFY YOUR CALLING.

A better heading would have been—Your Calling, *let it be duly estimated!* There is no use in *magnifying* the calling of the husbandman, if it be properly understood and justly appreciated. The reflections here extracted, page 365, from Chowles' oration, are excellent. There is no calling comparable with it, for health and intellectual enjoyment, if, with the practice of agriculture, you can only combine *a fondness for books.* See SKINNER'S essay on that subject, published, I believe, in the American Farmer, and in the National Intelligencer. Then comes an important little, labour-saving scrap, teaching how

TO PREVENT WEEDS FROM GROWING IN A NURSERY,

By covering the ground between the rows with *spent tanner's bark.* I have long believed that farmers on tide-water might save much labour and gather as good crops, by covering their gardens and root crops with sea-ore, and what is called *hog-grass*, to be gathered in great quantities in the spring. It would keep the ground *moist*, and keep down grass and weeds. I wish some tide-water farmer, near St. Michaels, an important port of entry and place of ship building, on that great estuary of the Chesapeake, St. Michael's river, would make the experiment on a row of beets, or potatoes, or cabbages, and report the result. The next is rather a greasy subject—one that I would have passed by, had it *not* been for the remarks of *the Editor*, whose notes infallibly catch my eye, and are *always* found worthy of especial attention. On the strength of his recommendation, I will try

LARD-OIL.

The next communication is on "MEDICATED TAR." I should have read it, but seeing the word "*oxygen*," the English of which I could never remember five minutes, I go on to *Cranberries;* but as I would as soon think of eating green *black*berries which are *red* when they are *green*, and as all such very sour things require more sugar to make them palatable than they are worth, proceed to

AUTUMNAL PLOUGHING FOR OATS.

This would be passed over, for want of *date and place*, were it not for its intrinsic importance. The extract, however, given by "JOHN DALEY'S" correspondent, from a work on husbandry, is evidently from a *British* work; and who, that has not been in England, knows how to make the appropriate allowance for difference of climate? Reasoning that applies to British agriculture in a great variety of cases, is very often *wholly inapplicable* to our country, for various reasons, and most especially on account of difference in the cost of *labour*, and *climate.* Fall ploughing may be commendable in one country for a given purpose, and condemnable in another. In England, turnips stand out in the field, and sheep are folded and pastured upon them through the winter—hence the great saving of labour, and the immense results attending *sheep and turnip husbandry* in England, that cannot be realized in America.

As to *oat culture*, I believe in *early sowing*, and in much thicker sowing than we practice in this country for all grains and grasses. True, the higher manuring in England renders thick sowing there more eligible than here, yet we generally sow too little to the acre. The heaviness of the straw and its capacity to make stronger manure, and the weight and value of the grain, are increased, not by being cut earlier in the season, but earlier in reference to its stage of perfect maturity. The extract from the English work on husbandry, speaks of *covering the oats by* FIVE *harrowings.* Here, again, you see the difference in the price of labour, and may judge how much more perfect must be the tillage where the farmer can stop to plough up his oat ground in autumn, and then cover them by *five* harrowings in the spring! In England two acres of wheat will cost, for mowing 55 cents, binding 44 cents, lifting 33, and raking 22 cents, say $1.54 for two acres, or say 77 cents an acre, and these acres probably average 30 bushels—how does that compare with American yield and expense?

The next paragraph ought to be printed in large letters and hung up in every farmer's house—*right side up.* It runs thus: I copy it for the sake of impressing it more indelibly on my own mind, though I have been preaching it for 25 years, which is nearly half my life-time.

"ONE OF THE CHIEF ERRORS OF OUR HUSBANDRY IS CULTIVATING TOO MUCH LAND; BECAUSE IT IS ONLY HALF DONE. HALF THE QUANTITY, WITH DOUBLE THE WORK ON IT, WOULD INSURE DOUBLE CROPS, WHICH WOULD BE FOUND MORE PROFITABLE." This may not be true to the letter, but the principle is good.

The next paragraph runs—"We should be sorry to have *everybody agree with us, or ourselves agree with everybody else:* this would be dull work, and put an effectual stop to all inquiry, consequently to all intellectual progress." This is very true, and argumentation is very agreeable, especially when a man feels as it progresses, that *he has got the best of it*—that is, when his antagonist is the better informed of the two, and therefore he perceives that the account of loss and gain runs all in his own favour. But how, when you meet, as we sometimes do, with self-sufficient fools who think they have nothing to learn, and therefore deal in dogmas and maintain vehemently that *so it is—because it is so!* With such wiseacres I make it a point never to "argufy and 'spute a point!" If they say it's a whale, I say it's very like a whale. So with some men who happen to have a big bull or a fat hog; they say no other breed is fit for anything, and I say, yes—it's a cloud, or it's smoke—just as you please.

Next stands before us The Kerry Cow. Be not cow'd, reader, at the fear of encountering here a dissertation on a new breed of cows. We have already the *short* horn Durham, the *long* horn Irish, the *middling* horn Devon, and the *no horn* muley cow, to dispute about and choose from. By the bye, there is perhaps no community whose diet is more *lactiferous* than is that of the good people of Washington. The vast commons belonging to the corporation and to Uncle Sam, are divided into 6 or 8 ranges, pastured by from 70 to 100 cows each. The same lot of cows graze every day in their own pasture. It's curious to see these herds of 100 cows come slowly concentrating upon the city from their various ranges in the afternoon—"the lowing herd winds slowly o'er the lee"—with always the same leaders in the van. Mem,—Those who keep cows begin to learn that the best way is to look out for the small, thrifty, ill-fed cow, from the lower counties—or, as they class them all, "St. Mary's county"—rather than buy a large, fat, high-fed Lancaster or Loudon-county cow, that soon falls off here, on our short commons and shorter appropriations! In buying a cow for his own use, a poor man should always seek to get one that has been not quite so well kept as he can keep her, and then she improves instead of *falling off!*

The next three articles do not suggest, or will not admit of, comment or abbreviation. They are headed Agricultural Chemistry, from Leibig—Germination of Seeds—and Shoeing Horses, by J. S. All these articles are good. J. S. might have added about shoeing, in the way of advice, that every owner of a horse should stand by and see his horse shod the *first time* at least, if it be only in kindness, to see that the fright which is natural to a young horse under such an operation, is not followed by violence and harsh treatment from the smith—which will ever after make him apprehensive, and difficult to be shod.

Having no time, even if there be room, for comment on the remainder of your last number, I remain, Mr. Editor, your friend and obedient servant, S. S. I.

Washington, July 20, 1842.

Influence of Water upon Nutrition.

Water influences vegetation not only by the nutritive principles furnished to plants by its decomposition, but by means wholly physical, and which we shall first consider.

The first effect of water upon a soil appropriated to vegetation is, to moisten and divide the earth, and consequently to favour the extension of roots, the introduction of air, and the developement of seeds.

The second is that of conveying to the seed the first aliment required by it, oxygen, which that liquid always holds in solution, in a greater or less degree, and which is, as I have already observed, the principal agent in germination.

The third office performed by water is that of dividing the manure applied to the soil, of dissolving some portions of it, and conveying them to the organs of the plants in a state fitted for their digestion and nourishment.

All kinds of water are not equally suitable for this purpose; rain water, which is the purest, and contains the most air of any, is also the best for supplying the wants of plants. Generally speaking, those streams which have their rise in granite or primitive calcareous mountains, are favourable to vegetation; but it is necessary that they should flow through soils free from metallic salts or earths; and that they should have traversed, before being used in agriculture, a sufficient space to have become impregnated with a due portion of atmospheric air.

Streams may not be pure, and yet may be very serviceable for watering the soil, especially if they carry, or hold in solution, certain salts favourable to plants, and some vegetable or animal substances.

When plants have yielded to water all their soluble portions, the subsequent decomposition of their insoluble fibres furnishes new soluble products, which serve for nourishment; water imbibes these as fast as they are formed, and transmits them to the plants with which it comes in contact. In this manner dead plants supply food to the living, and all the elements composing the first are found differently combined in the last.—*Chaptal's Chemistry.*

There is an old saying, that "if children are fed upon roast beef, they will require a good deal of physic." The English of this is, that *simple diet*, and plenty of *exercise* in the open air, will be far more likely to lay a foundation for sound health, and a good constitution, than *high living* and *over-much carefulness.* And what, of outward blessings, is more desirable, or more intrinsically valuable, than "a sound mind, in a sound body?"

True Philosophy.

Let those that will, repine at fate,
And drop their heads with sorrow;
I laugh, when cares upon me wait—
I know they'll leave to-morrow.
My purse is light. but what of that?
My heart is light to match it;
And if I tear my only coat,
I laugh the while I patch it.

I've seen some elves, who called themselves
My friends in summer weather,
Blown far away in sorrow's day,
As winds would blow a feather.
I never grieved to see them go,
(The flatterers who would heed em?)
For what's the use of having friends,
If false, when most you need 'em?

I've seen some rich in worldly gear,
Eternally repining,
Their hearts a prey to every fear—
With gladness never shining.
I would not change my lightsome heart,
For all their gold and sorrow;
For that's a thing that all their wealth
Can neither buy nor borrow.

And still, as sorrows come to me,
(As sorrow sometimes will come,)
I find the way to make them flee,
Is bidding them right welcome.
They cannot brook a cheerful look—
They're *used* to sobs and sighing;
And he that meets them with a smile,
Is sure to set them flying.

Even. Jour.

For the Farmers' Cabinet.

Orchard Pruning.

Mr. Editor,—I have found that the business of pruning might be done early in the autumn with decided advantage, for it gives the wounds of the tree time to dry and harden before the frosts set in; and if the horizontal branches are permitted to remain, and those which have taken an upright direction be judiciously shortened, the bearing of the tree will be much encouraged and the shape of it improved. A few strong upright shoots have often been found to carry with them the strength and fruitfulness of the tree, and in the end to quite spoil its symmetry and proportions; they generally become naked and even devoid of foliage for the greater portion of their length, and are liable to be affected by every blighting wind that blows, particularly at the time of blossoming and at the period of the setting of the fruit; indeed it is seldom, comparatively, that such strong upright shoots are either useful or ornamental. The common method of pruning, namely, to induce the tree to cast its branches high and perpendicular, with the view to increase its fruitfulness by throwing the bearing wood into the sun and air, is certainly wrong, and so also is the custom of thinning out the branches inordinately, with the same object; there is a medium which it is necessary to observe, and I have long been convinced that more evil is done to an orchard by over-pruning, than allowing it to remain in its natural state. I could point to hundreds of trees which were once good bearers in the hands of a man who was proverbial for letting things take their course, but which are now, and have been for several past years quite barren, in consequence of the present proprietor being, what is called, fond of the knife, and who boasts that it has not cost him a cent for firing for so long a time, the pruning of his orchard having furnished the house with wood in the greatest abundance, and of which he can see no end.

Now, I am an enemy to this mode of wood-chopping, for I can see that it is ruinous in the extreme; it encourages the trees to send forth perpendicular and barren wood, and draws the substance of the tree towards the top, quite reversing the order of its nature. But there is as certainly a judicious mode of doing things, and I know of none that requires more the judgment and taste of a man, than that of *pruning*, simple as that operation appears to those who are least acquainted with the *science*, which requires study as well as practice. If persons would be content to perform the operation partially, and by degrees remove the large branches of a tree which has long been neglected, they would not see so commonly, that the head of it has shot up into one mass of *fire-wood*, quite without the possibility of affording even space for bearing, the blossoms of which, if ever they attempt to make their appearance, being weak and of an unhealthy appearance and shape. This mode of pruning is alone sufficient to throw a tree *out* of bearing; and although it might be said to create new wood, it is of a kind that will produce no fruit; generally speaking, it is the horizontal branch of a tree which is the bearing wood, and that which ought to be preserved; one of these often producing more fruit than half a hundred of those which shoot perpendicularly. On cutting off the limb of a tree, there is always an escape of a portion of the juice—this in time becomes putrid, and in this will insects deposit their eggs—or, as many believe, this exuded putrid juice will, of itself, produce them: it is, therefore, highly proper to have ready-prepared a quantity of the medicated tar mentioned in your last number, with which to anoint the wounds made at the time of pruning; this will be found to dry up the juice and stop the bleeding, as also to protect the wound from the attacks of the insect tribe.

Malum.

July 19, 1842.

Root Pruning.—The last Magazine of Horticulture has a valuable article upon the root pruning of trees, by which they are made more prolific and kept in a smaller compass than if suffered to grow naturally.

For the Farmers' Cabinet.

The Pumpkin-rumped Cattle.

Mr. Editor,—I find in the recently published volume of the New York State Agricultural Transactions, a very particular and well-defined description of this breed of cattle, which I believe has deceived many of us into an admiration for them which they by no means deserve; and as I conceive there are still those amongst us who would be benefited by the diffusion of a little more knowledge on the subject, I have transcribed from the Report of the Committee on Animals for Tompkins County Agricultural Society, the well-written account which follows, and which I present for publication in the Cabinet.

"In speaking of the Durhams, your committee have no reference to a breed of cattle often called by that name, but whose characteristics are essentially different, and which, by assuming the name, have injured the reputation of the genuine Durhams over various sections of country. We allude to a variety of Yorkshire cattle, readily distinguished by the peculiar conformation of the hind quarter, which is not dissimilar to the hog in a high state of fatness. Hence they are designated in some portions of the country as 'hog-ham'd,' 'pumpkin-rumped,' and by other appellations descriptive of their peculiar form. From the hip to the point of the rump, they are short, like the hog; and from the root of the tail to the bottom of the fleshy part of the thighs, the buttock projects outwards, describing more or less completely the segment of a circle, instead of the nearly perpendicular line which distinguishes the true Durham. Marshall, an English author of high authority, calls them 'the cloddy-buttocked Yorkshires,' and speaks of them as one of the worst breeds known in England. Usually of a deep red colour, not destitute, too, of a certain general smoothness and symmetry; growing with great rapidity and thriftiness when young, and attaining a large size, it is by no means singular that they should attract notice and admiration, where their properties are unknown; and possessing such qualities, it may, perhaps, be asked, what are the counter-balancing disadvantages which should lead to their condemnation, and which at this time calls out this so direct and explicit censure from your committee? The very size, apparent thriftiness and showy qualities of this breed, form reasons which have influenced your committee in this course; and from the fact, that such outside qualities are well calculated to deceive the inexperienced. And it is well-known they have so deceived the stock growers in many sections of our state; not only occasioning actual loss—for we deem them entirely inferior to our native breed of cattle—but they have retarded improvements, discouraged others' efforts, and not unfrequently led to an entire scepticism on the part of the farmer, as to the feasibility of any improvement in our breeds of cattle. Their bad qualities may be summed up as follows, viz.—1. Cows often perish in giving birth to their calves, the great size of the rump in the fœtus rendering it impossible to pass the bones of the pelvis. 2. Although always fleshy, they are never fat; the beef never handsomely mottled with fat and lean; and they are proverbially poor provers, or in other words, they do not tallow well. 3. Their meat, when killed at any age, has a dark or blue tinge, which renders it far less valuable or marketable. 4. They are decidedly an inferior race of milkers."

On reading the above description, I was tempted to turn to the portrait of the Durham bull "Patriot," page 345 of the 5th vol. of the Cabinet, and almost fancied that I could detect in his remarkably round and full buttock, a little too much of the fault here pointed out; but I suppose I must be wrong, for we are there informed that he sold for five hundred guineas, which to be sure was a sum of money sufficient to cover a very large "sin." I wish, however, that some of our "thorough-bred" friends would please inform us if, at this time of day, such a buttock would not be considered rather large than otherwise; at all events, it will not admit of the description given of the improved Durhams in the above report, namely, the *nearly perpendicular line* which in them forms their distinction, and which I could but particularly remark to be the case in these two peculiarly fine bulls—so very much alike, too—"His Grace," and "Prince of Wales," which were exhibited at the Philadelphia Agricultural Show, at the Rising Sun, the last year, and which, as they so richly deserved, won golden opinions. In conclusion, may I be permitted to ask, if I am at liberty to consider these two bulls "the best in the United States" at the present day?—or if not, would one of the many, whom I am willing to admit are likely to know more than one, who is by no means conversant with the "niceties of judgment" of which he hears—namely, "that it takes a full hour thoroughly to examine an animal, beginning with the inside of the eye and nose," be pleased to point out their imperfections.

W. O.

"Celerity is never more admired, than by the negligent."

For the Farmers' Cabinet.

Horse-Rake for Grain.

As it should be the duty of farmers to make known to each other the improvements they discover for mutual benefit, I am willing to suggest one which I have tried for some years past, and it has proved to me, in the busy season of harvest, much saving of time and expense in gathering my wheat and oats, which I cradle. Having a common hay-rake, the teeth of which were rather dull, to run as easily as I could wish into the hay before it had dried considerably, I thought to get one with the teeth iron-pointed, and did so; and the old one I spliced, and made it so much longer, as to add two more teeth at each end. I have ever since used it for raking up my wheat and oats, in the same way we do hay, by letting the horse walk between two rows of swarths; and I think I can rake, in this way, two rows at a time, as fast as six men can bind. In general, I rake morning and evening, and not when the sun is most powerful on the grain in the middle of the day, lest it should shell it out; and I thereby save more grain as well as labour, than when I used to rake with the hand-rake. To rake good, the swarths should be very long, to prevent frequent turning of the horse over the ends.

ANDREW C. RIDGWAY.

Upper Freehold, Monmouth Co., N. J.,
7th mo. 6, 1842.

Thorough Tending of Corn.

WE extract from the communications of an intelligent correspondent of the Marlborough Gazette, and a firm friend of the Cabinet, a very interesting account of the effects of a destructive *fresh*, which took place in that part of the country on the 14th day of July last; for the purpose of introducing his rational reflections on the proper times and seasons for the cultivation of the "king of grain-bearing plants." To us they appear to go far to answer the question, "How is it, it so often happens that corn, which has, by some means escaped its last workings, turns out a better crop than that which has been tended to the end?" We invite the attention of our practical friends to the subject, as the present season will afford innumerable instances of partial tillage, the extremely wet summer having rendered thorough working absolutely impossible.—ED.

A current of this tremendous fresh had crossed the road and washed up some stalks of corn, leaving the roots more perfectly bare and clean than could be done by the most careful manipulation. There they were, stretched along the course of the ravine, on the surface; the force of the current, after the earth had all been nicely washed away, having collected the threads and spread them together like a tangled hank of white-brown thread. It struck me in an instant that I had never seen, and might never again see, so good a *specimen* to exemplify the extent and process of the *growth of the roots* of this king of grain-bearing plants. So I leaped from my horse, plucked a few of the roots close from the foot of the stalk, wound them into a large ball, put it into my pocket, and I wish you could see it, as it hangs now before me, suspended from a nail at the top, and falling below the bottom, of a "twelve-light" window over my table—looking much like what a gentleman guessed it was, a large '*bunch of sea-grass*,' measuring *fully four feet in length!*

I shall send it to be preserved in the botanico-agricultural department of the *National Institute;* an establishment, by the bye, which all American husbandmen should cherish, as it is so admirably fitted, by its collections and researches, to gather uncommon and valuable seeds and plants, and advance in every way the science and profits of agriculture. This bunch of roots, spreading as already stated, from a single stalk, in all directions around to the extent of more than four feet, before it was washed up, and permeating, as it were, every inch of ground, suggests interesting hints and reflections on the growth and culture of that noble plant. Pray, will you invite some more practical, and otherwise better qualified correspondent, to take up these *threads* and follow them to useful conclusions, as to the proper times and depths of hoeing and ploughing and manuring in reference to the propensity of this greedy plant, as here established, to open a hungry mouth, in every minute sub-division of the soil, where a particle of nutriment can be found?

The corn in this case was probably planted about the 20th of May;—it was very good, without being very extraordinary. These facts, among others, are established by this specimen: that up to the 15th of July—say in two months—the growth of the roots in length much exceeded the stalk—that is, the solid portion of it;—that from each main root thousands of fibres branch off in search of food, and that it would not now, though the crop has not been "laid by," be practicable to plough, even one furrow through the middle of the row to the depth of eight or ten inches, without severing some of the main roots, with their innumerable fibres, searching subsistence in all directions, and forming a closely matted web-work. Here, as to the effect of occasional and of partial severance of the roots, can it be, under any circumstances, beneficial? and do its effects depend chiefly or entirely on the weather—or does not the fact, that these roots are lying near to, or below the surface, in reference to the presence of their appropriate food, and in proportion to the depth of the tilth, admonish us that the earth, or pasture in which the plant is to graze, should be made soft and penetrable, in proportion to the quantity of sustenance to be found, and that the food being thus made accessible at planting time, or before, to the messengers which are to be sent after it, these messengers, or roots, should be left quietly to do their office, without being disturbed or in any manner crossed or interrupted, after planting time: stirring only the surface lightly after that, to let in air and moisture and such aliment as they may of themselves afford; and by their agency, render more soluble the food which the pasture contains, thus converting it more easily and completely to the sustenance of the plant? Let every one, Mr. Editor, draw his own conclusions, but let him not selfishly *hide his light under a bushel!* that's neither liberal nor fair. S. S. I.

Washington, D. C., July 15, 1842.

Results of Garden Culture.

Profitable Farming.—George Pierce, of West Cambridge, Mass., about six miles from Boston, has a home lot of little more than 7 acres, which he cultivates in the same favoured district of which I have been speaking.

Besides this, he sometimes extends his cultivation by hiring occasionally small lots in the neighbourhood.

The extent of his out-lots is not given; but it may be inferred from the fact, that for one of them he pays an annual rent of $35; for the other piece $40.

The amount of sales from the whole three within the year thus far, is $3,428.64.

The amount of sales from this home lot of 7 acres, is $2,779.54. The amount paid for labour on the whole up to this date (27th Nov. 1841,) is $499.99, without including the expense of the board of the men.

This, I presume, does not embrace any charge for his own labour and supervision and marketing. The bills paid since the last spring for manure amounted to nearly twice that sum.

His particular aim is to raise fruit and vegetables for the market, such as apples, peaches, strawberries, raspberries, and lettuce, radishes, spinach and other greens, early cabbage, cucumbers, squashes, melons of various kinds, cauliflower, brocoli, beets, carrots, turnips, peas, beans, onions, &c., all of which are profitable crops, when he is successful in growing them.

He plants little corn and potatoes, as he thinks he can use the ground to much better advantage. Some of his most productive crops the present season have been fall-sowed onions, from a piece of land three rods in width, and eight rods in length, which gave him $167. Another profitable crop was saba, or, as they are sometimes called, seve beans; there were 1348 hills, which on the first picking yielded $38.

The yield, according to the account kept, amounted to $70, when having lost his minutes, he was unable to ascertain the entire amount. Of string beans he had last season two acres. From this lot it was not unusual to carry ten barrels in a day to market. In two weeks he carried from this lot to market 172 bushels, the average price of which was 67 cents per bushel, $115.24. At the same time the ground was occupied with other crops, such as melons, tomatoes, cauliflowers, cabbages, &c.

As soon as the beans had ceased to bear, the vines were immediately removed, and the ground being well cultivated, there was ample room and time for the other crop to grow. Many of his early vegetables are forwarded in hot-beds under glass. On most of the ground which he cultivates, he gets from two to four crops. A crop of radishes, lettuce, beans and cucumbers, may be had on the same ground the same season, and to these a fifth crop of fall spinach is sometimes added. In the present season he says, he has had crops, which by the old modes of husbandry would have occupied ten acres, growing upon four acres.

His practice is for the first crop, to give such a dressing of manure as will carry that and the succeeding crops well through without renewal. He never manures sparingly.

His onions are sowed in July or the first of August. They are lightly covered with litter in the fall, and early in the spring are uncovered and become soon fit for the market; and the crop is off the ground in season for its successor.

Mr. Pierce values very highly stable manure, and wishes to apply it to his crops in its hottest state. It then forces vegetation most rapidly and powerfully. For ashes he has a high estimation, and when the soap boiler calls to buy his ashes for the customary price of ten cents a bushel, he replies by offering the soap boiler 20 cents a bushel for all he has, and buys them if he can. I give his opinions as those of a strictly practical man, of much experience, and perhaps inferior to none in the admirable skill and success of his cultivation. It is pretty evident that he does not wait in the morning for the sun to call him.—*Colman's Agricultural Report.*

For the Farmers' Cabinet.

Bucks County Wheat.

Friend Pedder,—In a recent trip to the county of Bucks, the land of my nativity, I was highly gratified with the profusion of vegetation which covered the earth.

The wheat, that important crop to our country, however, was nearly gathered; and it was no uncommon thing to hear of a farmer having raised from five to twelve hundred dozens of wheat this season, and the Mediterranean being now generally sown, it was principally housed in good order. I saw but one field where the cradlers were at work, (July 21st,) and that upon an unbearded wheat, which was so rusted, that it was only worth cutting for the straw. The character of the Mediterranean is now fully established, as it is sown with as much confidence of reaping a fine crop, as oats or Indian corn, and indeed more so, perhaps, than any other crop. For, after minute inquiry, I could find no man who had ever seen it injured by the fly, and very rarely, and under the most unfavourable circumstances, as bad preparation and late sowing, by the rust. And finer bread I never saw than was made from this flour. And although the red chaff bearded, which for a long time has been the favourite in Bucks, did very well this year, yet W. S., one of the most prudent and thriving farmers in that section of the country, told me that after trying five different varieties within a few years, he now sows none but the Mediterranean; observing, "If I had given thirty dollars a bushel for my seed when it was first brought into the neighbourhood, I should have been the gainer." But he sows as early in September as circumstances will permit—and in consequence of the grain being large, he sows from one and a half to two bushels to the acre.

But the security from the rust and fly are not its only advantages to the farmer, for it may be sown on land so thin, that he would never think of risking any other kind of wheat upon it, and yet bring a good crop—and I know from experience, that thirty bushels to the acre can be raised after taking off a crop of potatoes, and without any additional manure—even when sown so late as the 11th of October, so that the rye crop will be almost superseded by it. But upon their rotation of cropping and some other matters, I may make a few remarks in your next number. M. B. S.

August 2nd, 1842.

Bitter pills may have blessed effects.

National Institution for the promotion of Science.

A move has just been made in relation to this great enterprise, which appears likely to secure all its various and admirable objects; and that presently and effectually.

An informal meeting took place on friday evening, the 10th of June; the Hon. Joel R. Poinsett, president of the Institution, was there; and, besides the Secretaries of State and of the Navy, the Hon. John Quincy Adams, the Hon. Messrs. Preston and Walker, of the Senate, the Hon. Messrs. Tillinghast and Ingersoll, and other members of the House, a select assemblage appeared, of gentlemen eminent in divers departments of science, literature, and the arts.

Mr. Preston informed Mr. President Poinsett, that a bill would be presented to the Senate, advising an appropriation of twenty thousand dollars, for arranging and preserving the objects collected by the Exploring Squadron. He stated that Mr. Adams had prepared a report in relation to the disposition of the Smithsonian bequest, and said it would gratify him if that gentleman should think proper to communicate his views to the meeting.

Mr. Adams stated, that he had recommended the investment of the interest for ten years, four of which had already expired, to form a fund for the establishment of an observatory, with salaried officers, and the publication of a nautical almanac; upon both of which, the name of Smithson was to be forever stamped, that his memory might be inseparably associated with his munificence.

A conversation was now started upon a question, as to whether the object expressed by Mr. Smithson in his will, "the increase and diffusion of knowledge among men," would be covered by confining his bequest to any particular branch of knowledge; and especially to that branch whereby he himself appears to have been much less attracted than by several others. Mr. Adams answered, that the observatory being once founded, leaving the principal of the bequest untouched, he could see no objection to the appropriation of the interest which would afterwards accrue, to such other objects as were now suggested; but he considered it due to Mr. Smithson, that his money, devoted in the way it has been, should perpetuate his name.

Mr. Tillinghast thought it seemed to have been Mr. Smithson's ambition to interweave his name with that of our country, and consequently he conceived that the appellation of the American National Smithsonian Institution might be substituted for the present one. Mr. Walker concurred in such a compromise, adding that the Smithsonian observatory, recommended by Mr. Adams, might form a part of the Institution under the more comprehensive title; in the support of which, not only might congress cooperate, but individual contributors, far and wide. The Secretary of the Navy cordially espoused the cause, and expressed his desire to aid the Institution by whatever the collections of the Exploring Expedition should yet yield, and promised his exertions with the other Secretaries.

A committee of five was appointed to confer with the Smithsonian Fund Committee, and with that of the Senate on the Institution, to ascertain whether their now conflicting views regarding the Smithsonian bequest, might not be reconciled advantageously for the Institution.

The meeting on monday evening last, to which the one on the friday previous, was preparatory, proved peculiarly brilliant. Notwithstanding the extreme inclemency of the evening, upwards of two hundred persons were present, and among them the President of the United States, the members of the Cabinet, many members of the two Houses of Congress, and a throng of distinguished persons.

Mr. Preston, in a burst of unsurpassed eloquence, dilated on the achievements of the Institution and its glorious prospects. Mr. Adams, it is said, has generously concurred in the general plan proposed. The Secretary of War put the seal to the movement by offering a resolution that a powerful effort should be made throughout the United States, to aid the great object by an appeal exhibiting the progress already effected, and that which seems now certain; for the furtherance of which, contributions, either in money or in materials, were to be invited from every quarter in our country, and to be associated with the invaluable collections of Mr. Smithson and of the Exploring Expedition. A committee has been appointed to carry out this excellent suggestion.

We note these matters, for want of time and space, but briefly; but we note them with more satisfaction than we can express. The subject is one of universal import; for this noble society, truly catholic in its spirit, is open equally to all, and there are very few of those for whom it possesses any interest, who have it not in their power to receive much from it and to bestow something in return. It needs no eloquence to prove that a national depository, to which illustrations and curiosities of science, the arts and literature, may be safely entrusted, either for a time or permanently, must prove, especially with the various inestimable adjuncts which enrich this, a national blessing; and as such, we invoke for it the national praise and patronage.—*National Intelligencer.*

Manufactory of Horse-shoes by Machinery.

Mr. Henry Burden of this city invented a machine for the manufactory of horse-shoes, and manufactured soon after its completion about 200 tons of the article. Not having, however, at that time sufficient room in his establishment to carry on this branch of manufacture conveniently, without detriment to his other business, he suspended it until this summer; having in the meantime made an essential and important improvement in his machinery, by which the horse-shoes now constructed are far superior to those made by the original machine. His new machines went into operation a few days since. Square, straight bars of iron are transformed into horse-shoes, grooved and punched at the rate of 15 per minute.

The machines are three in number. The iron being heated to a sufficient degree, is placed in the first, which cuts it off to the required length, flattens it, grooves it, and perforates it for the purpose of receiving the nails by which it is to be fastened to the horse's foot. It is next passed through the second machine, which bends it to the required shape; and finally to the third, which turns up the end of the shoe, to form the heel. Steel corks, made also by a machine, are afterwards welded on the shoe by a very rapid process, which completes the whole work. The shoes thus made, require no hammering or any attention whatever, but may be immediately applied to the use for which they are intended. The present cost of shoeing a horse by the old method, is one dollar and twenty-five cents. By the use of Burden's patent shoes, allowing the cost of nailing them on to be twenty-five cents per set, the cost of shoeing a horse will be reduced to fifty or sixty cents—or about one half the present cost. They are furnished of five different sizes, so that there will be no difficulty experienced in fitting horses' feet. Mr. Burden uses the best of Sweedes iron.

According to the last census, there are 4,000,000 horses in the United States. Allowing half of the number to require shoes, it is estimated that at least 25,000 tons of iron will be required to shoe them every year.—*Troy Whig.*

A New Disease of the Plum.

By Dr. T. W. Harris, author of the Entomological Report of the State of Massachusetts.

Last year an undescribed disease of the plum made its appearance in some gardens of this vicinity, in the latter part of the month of May, and has been observed again during the present season. Soon after the blossom had fallen, the fruit began to swell rapidly, and, in the course of two or three weeks, it had grown to more than ten times the size that it ordinarily attains in the same period. It was soft and compressible, as though it were puffed up with air, being filled with an elastic spongy substance of a whitish colour. In some of these inflated plums no vestige of a kernel remained; in others, a little, soft, and empty shell was found. After growing from one half to more than three-quarters of an inch in diameter, the fruit dropped, and by the middle of June no more of it was to be seen on the trees.

The cause of this puffy swelling of the fruit, and abortion of the kernel, is a little *thrips;* and several of these minute insects were found, on the 28th of May, on almost all the diseased plums. It is probable that they begin their attacks in the blossom, and that they prevent the impregnation of the ovule or young kernel, by destroying the pollen; and, by subsequently puncturing the plum, produce an irritation, which is followed by a rapid swelling and diseased condition of the fleshy substance of the fruit. Preternatural enlargements and distortions of the parts of flowers and of fruits, are known to be occasioned by the attacks of other species of *thrips.* This may be seen in the blossom of the black whortleberry, (*Resinous vaccinium;*) all parts of which, calyx, corolla, stamens, and ovary, are sometimes enormously enlarged, and entirely changed in texture and appearance, in consequence of the punctures of a kind of *thrips.*

It is not yet known how far this affection of the plum has extended. In this vicinity it seems to have been confined to certain trees only. Should the insects multiply and spread to other trees and other places, they will prove very destructive to the fruit hereafter. It remains, therefore, for the practical gardener to watch for their first appearance, and to devise some sure means of killing them, while the trees are in blossom and the fruit is forming. T. W. H.

Cambridge, June, 1842.

We invite the attention of our readers to the above. New insects and diseases appear to be upon the increase, and it becomes the intelligent cultivator to watch attentively for the causes which produce such dire effects on his fruit trees. We trust we shall be able to offer other communications from Dr. Harris, on the habits of the various insects which annoy trees and plants, and thus be the means of leading to discoveries for extirpating them.—*Ed. Magazine of Horticulture.*

On Setting Out the Fruit Garden.

One thing is worth bearing in mind by those who purchase fruit trees: the best kinds are generally as *hardy as the worst,* and the difference in price fades into nothing, when compared with the difference in quality. Nobody is satisfied with mean fruit after having tasted better. For a fruit garden, a western aspect is generally best, because it is the least subject to sudden transitions of temperature. Severe vernal frosts often prove injurious, or otherwise, according to the weather that follows: if the sky be overcast in the morning and the air continues cold, little or no damage ensues; but when the sun breaks out warm, the injury is greatest, and the most so, where the trees are exposed to its rays. For this reason, a hill or a wood on the east side may prove beneficial. A northern aspect would go far towards insuring regular crops of the peach, nectarine, and apricot, if protected from the sun and warm winds by a belt of evergreens. On sandy soils especially, the reflected heat is often sufficient in autumn and winter to *start* the buds, and snow and ice have been successfully* heaped around the trees to prevent this disaster; but a northern aspect would, probably, render such labour unnecessary. Dry, firm ground must be chosen, preferring a sandy or gravelly loam, although clay will do well with good culture, but, peaty or spungy soils are apt to be frosty, for the radiation of heat from such is much greater than from firmer land.—*Thomas.*

Good and Bad Tools.—A writer in the Maine Cultivator, illustrates the importance of having the best implements, by showing that a hand with an excellent axe, and a handle well hung, would cut a pile of wood in 12 days, which would require 16 days labour with a poor implement. The difference of cost in the two implements is supposed to be 72 cents, and in this one operation four dollars are saved by the use of a superior tool. This is a fair specimen of the loss or gain by good or bad management, in furnishing implements of husbandry.—*Far. Jour.*

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* The blooming of an apple tree was delayed a fortnight after the rest of the orchard, by piling wood around it.

For the Farmers' Cabinet.

American Aloe, or Century Plant.

I have, this afternoon, been much gratified by a visit to the great American Aloe, *Agave Americana*, now in full bloom, and exhibited at the Masonic Hall, in this city. As its name imports, it is a native of this continent, and in the verdant prairies of the South-west flourishes in great luxuriance. The popular impression seems to be, that it will not bloom until it has been matured by a *hundred* seasons. This, however, is not exactly the case. Loudon, in his Encyclopediæ of Plants, insists that it will flower sooner, or later, according to the culture bestowed upon it. In tropical climates, where it grows rapidly, and shoots out a number of leaves every year, it will bloom when thirty or forty years old; but in our colder, and more changeable one, a much longer period is generally necessary. If the plant had the same treatment as the pine-apple, Loudon thinks it would probably bloom nearly as often. Cowell of Hoxton, asserts that his own, in 1729, was the first genuine *Agave Americana* that ever flowered in England.

The present specimen, which the Ledger of to-day says is 95 years old, is one of the original plants grown by Wm. Hamilton, Esq., at the Woodlands, in this vicinity. After his death, it went into the McMahon family, and thus into the hands of its present owner, Bernard Duke. On the 17th of 5th mo. last, it first exhibited a flower stem; and from that time to the 8th of last month, this stem grew a little more than 20 feet, averaging more than 4½ inches per day. The greatest growth in any one day was 9 inches, on the day of its first appearance; and the least was 2 inches. "On the 8th of July, the stem seemed to cease in its upward growth, and commenced rapidly to throw out its lateral branches, and to form its buds, which consumed the greater portion of that month. On the 29th, it expanded its first flower, at which time the spread of the lateral branches from tip to tip was nearly five feet. The whole number of these is 22. The probable number of flowers which will be displayed on this plant, cannot be less than 1800 or 2000, and it will, if the weather be moderate, be likely to remain in florescence for three or four weeks. The appearance of the Agave is gorgeous and interesting; and its yellow flowers, though not so extremely beautiful when examined singly, yet the rich clusters which deck the summit and branches, present a magnificent spectacle." The plant, it is believed, never blossoms but once.

The cultivation of the Aloe is simple. It is easily propagated by means of suckers, which are produced at the sides, and from the roots of the parent plant. They may be safely kept in a green-house, or even in a dry cellar, during winter. They should, however, be placed in the open air early in the 5th mo., where they may be kept till the latter part of the 10th mo.; during this time they should be kept moist; but in the winter season, nearly dry. In America we have as yet had but three or four specimens to produce flower stems; the first of which did so at the Woodlands in 1804. "This plant first started its flower-stem on the 28th May; it grew very rapidly, putting out branch after branch, till they numbered 27 in all, each of which contained 116 flowers. The first bloom appeared on the 29th of July, after which it continued five weeks in flower. It was visited by upwards of 20,000 persons." The next bloomed at Lemon Hill, near Fairmount, the seat of Henry Pratt, Esq., who generously presented it to the orphans' asylum of this city, and for whose benefit it was exhibited to upwards of 30,000 persons. This plant was only 43 years old. The largest, probably, that ever bloomed, belonged to the King of Prussia, and was upwards of 40 feet high.

In the *Cultivator* of this month, we find a notice of one of these magnificent plants, in the green-house of Gen. Van Rensselaer, of Albany. It has been in the family more than half a century, and is probably by this time in bloom. The flower stalk, a fortnight ago, was 17 feet high, and growing 7 or 8 inches a day. The owner, at the request of the managers of the orphans' asylum, has generously consented to its public exhibition, for the benefit of that institution, only reserving a free admission to his visiters, and to the tenants of the manor of Rensselaerwyck.

It is said that a soap is sometimes made in the West Indies from the leaves of this extraordinary plant, and that it will lather with salt water as well as fresh. The leaves—some of which on the specimen before us, are five feet long—may be used for scouring pewter, &c. The inward, spongy substance of the decayed stalk, is used for tinder; and the fibres of the leaves, separated by bruising and steeping in water, and afterwards being beaten, make a strong thread for common use. T.

Philad., 8th mo. 5, 1842.

If you would save labour, never suffer the grass to get ahead in any crop that needs culture. The old adage, a stitch in time, saves nine, is in no circumstances more to the purpose, than in farming.

Compost Manures.

As a general thing, our farmers do not appear to be sufficiently aware of the importance of making and saving manure; a subject unquestionably of the very first magnitude, as respects the advancement of our agricultural prosperity, and in which every farmer, however limited his circumstances, possesses sufficient facilities to enable him to engage with profit. Of these facts, it is presumed there can be no doubt. For many years, the only manure made use of on my farm, were those accumulated in the yards and sties; and without the slightest attention, on my part, to the operation of those natural laws, a knowledge of which has since enabled me, with slight expense, greatly to augment the quality also of my manures. Nothing is more common, than to hear individuals complaining that their farms are fast "running out;" that the soil, in their old fields, has not sufficient depth to sustain a crop, and is too poor to remunerate them for the cost of cultivation.

But why, if, as some contend, there is a natural propensity in all soils to deteriorate, or, as it is more popularly termed, to "run out," has the soil of Great Britain gone on rapidly increasing in productiveness for the last five centuries? Why is it, that many farms in Massachusetts, and even some few in Maine, where the doctrine has numerous supporters and abettors, have withstood the drain upon their natural fertility, by constant cultivation, for upwards of two hundred years? Farms of this description are by no means scarce in either state; and, although cultivated for so long a series of years, are now, instead of being worthless, and "run out," like many of a more recent date, the best and most productive in the land. The fact is, nature, in these instances, has received assistance, instead of being compelled, as in the case of all worn-out farms, to do all herself. For every crop taken from the soil, a prompt equivalent has been returned in fertilizing manure; and the farm, instead of being drained and exhausted of its energies, has actually received an increase of strength, and gone on accumulating, from year to year, the constituent elements of the food for plants. Shallow ploughing, and scanty manuring, will, in a short time, render the best land poor; while a contrary course, if judiciously pursued, will as certainly make poor land good.—*Far. Journal.*

Beets should be weeded when the ground is dry. Three times is the general rule, but a better rule is to weed and hoe just as often and as many times as the weeds make head, or the surface of the ground gets caked.

Prospects of Agriculture.

We have recently been on an excursion through a large part of this county and York, through the lower part of New Hampshire, and parts of Essex and Middlesex counties, in Massachusetts; and everywhere the crops of all kinds promise unusually well. There is no exception. The winter rye, both in quantity and quality, far exceeds the crop of any former year. We conversed with persons from the west, who have just passed through the greater part of Ohio, Pennsylvania, New York, and several of the New England States, who informed us that throughout their journey the fields were clothed with the most luxuriant crops. This is (with a few unimportant exceptions) the truth in regard to every section of the Union, if the united declarations of the public press are to be relied upon. Never was there a season that promised such abundant harvests since the first settlement of the country up to this time, as the present. Rich fields, laden with the choicest fruits of the earth, and in the greatest profusion, lie spread out from the borders of our own state and New Hampshire on the East and North, to the borders of Louisiana and Illinois on the South and West, and the seaboard to the Lakes; which together with a general state of health and the progress of temperance and morality, call for the gratitude and thanksgiving of all hearts to the Author of all good.—*Eastern Argus.*

From the British Gardener's Chronicle.

Asparagus.

A few weeks since, we reported briefly the substance of a paper upon the cultivation of asparagus in the north of Spain, which was communicated to the Horticultural Society by Captain Churchill, of the royal marines. This gallant officer was at St. Sebastian during its occupation by General Evans; and he profited by such leisure as his military duties afforded him, to make himself acquainted with the natural history and horticulture of Guipuscoa. We might content ourselves with merely referring the many inquirers who want to know how to grow asparagus well, to the report just alluded to; but in our opinion, it is much too important to be passed with so little attention.

Asparagus is probably the vegetable most generally admired and most seldom well cultivated; it is only here and there, that it is large, tender, and delicate. In country gardens it is small, green and strong; in the London market it is long, white, hard and tough—to the eye attractive enough, but to the taste more like bleached timber than an esculent. Indeed we have never been able to comprehend the reason why, in this our age of improvement, some ingenious turner has not produced imitation sticks, which might be tipped with half an inch of eatable asparagus, and thus spare the necessity of cooking four-fifths of the stuff that is brought to a London table. Covent Garden asparagus is assuredly the worst in Europe. For this reason, when really fine asparagus is met with, people think it must be some peculiar sort. Obtain the roots from Vienna, Berlin, Hamburg, Battersea, or Deptford; and then, when they find them producing heads identical with what they had before, lay the blame to the seedsman, or the soil, or the climate, or anything rather than their own want of skill. There is but one sort of asparagus, be its name what it may; all the difference consists in its cultivation.

Captain Churchill says, the Guipuscoan asparagus measures from three to six, and more inches in circumference. How this is obtained, his excellent account leaves no room to doubt.

Asparagus is a plant found naturally on the beach of various parts of the coast of Europe, where it is covered by the drifting sand, and watered by salt water at high tides. Sand and salt water occasionally may, therefore, be regarded as indispensable conditions for maintaining it in health. How seldom is this thought of. It, however, explains in part the excellence of St. Sebastian asparagus.

It seems that at the mouth of the Urumea is a narrow slip of land, about three feet above high-water mark, consisting of alluvial soil and the wearing away of sandstone hills, at whose foot it is placed. This is the asparagus ground of St. Sebastian. Beds are formed five feet wide, without any previous preparation except digging and raking. In March the seed is sown in two drills, about two inches deep, and eighteen inches from the alleys, thus leaving a space of two feet between the drills. The rows run invariably east and west; doubtless in order that the plants may shade the ground during the heats of summer. When the seedlings are about six inches high, they are thinned to something more than a foot apart. Water is conducted once a day among the alleys and over the beds, so as to give the seedling an abundant and constant supply of fluid during the season of their growth. This is the cultivation during the first year.

The second year, in the month of March, the beds are covered with three or four inches of fresh night soil from the reservoirs of the town. It remains on them during the succeeding autumn, the operation of irrigation being continued as during the first season. This excessive stimulus, and the abundant room the plants have to grow in, must necessarily make them extremely vigorous, and prepare them for the production of gigantic sprouts.

In the third spring, the asparagus is fit to cut. Doubtless all its energies are developed by the digging in of the manure in the autumn of the second year; and when it does begin to sprout, it finds its roots in contact with a soil of inexhaustible fertility. Previously, however, to the cutting, each bed is covered in the course of March very lightly with dead leaves, to the depth of about eight inches; and the cutting does not commence till the plants peep through this covering, when it is carefully removed from the stems, in order that the finest only may be cut, which are rendered white by their leafy covering, and succulent by the excessive richness of the soil.

In the autumn of the third year, after the first cutting, the leaves are removed, and the beds again dressed with fresh night soil as before, and these operations are repeated year after year. In addition to this, the beds are half under salt water annually at spring tides.

Let any one compare the mode of culture with ours, and there will be no room for wondering at the difference in the result. The Spaniards use a light sandy soil; we are content with anything short of clay. They irrigate; we trust to our rainy climate. They know the value of salt water to a sea-coast plant; we take no means to imitate nature in this respect. They dress their beds with the most powerful of all manures; we are contented with the black residuum of a cucumber frame, which is comparatively a *caput mortuum*. Finally, they throw leaves lightly over their beds, by which means they expose the young sprouts to the least amount of resistance, and force them onward by the warmth collected from the sun by such beds of leaves; we, on the other hand, compel the asparagus to struggle through solid earth, capable in the smallest possible degree of absorbing warmth during the day, but ready to part with its heat again at night to the greatest possible amount.

Can any one wonder, then, at the poor results obtained by our manner of cultivation; or that some gardener should now and then astonish his neighbours by producing asparagus which we call giant, but which at St. Sebastian would be called second-rate?

We have received a communication of two and a half foolscap sheets, from our friend J. H. T., in reply to W., at page 343 of our June number. It came too late for the last number, and in this we really have not room for the whole of it.

It appears to us that the paroxysms of surprise, under the operation of which "W." was induced to invoke the "thousand and one" shades of Jethro Tull and others—as well as the "gentle castigation" intended for him by Mr. T.—would have been unnecessary, had they been so fortunate as not to have misunderstood each other's meaning. While Mr. T. is discussing the question, whether it is not injurious to the "*land*" to remove weeds from it, and giving it as his opinion—in which, it appears to us, every one must agree—"that the removal of a weed or anything else from the land, cannot benefit the spot on which it grew," the mind of W. is altogether filled with *amazement*, that *weeds* should not be removed from the *crop!* While one is talking about *land*, the other is thinking of the *crop!* And this, as it appears to us, has led to the difference between them: as the *surprise* of W. added to his *astonishment*—"Orsa upon Pelion, and Olympus upon both—the ghosts of the dead summoned from their repose," merely because the writers in question have mistaken each other's meaning when talking about a *weed!* That the simple removal of a weed, or of a thousand weeds, should benefit the spot of *land* on which they grew, is not supposed. The growth of *weeds* among *crops*, has not been "advocated." We would say, let the farmer keep his land as clear of weeds as possible:—but when nature, in spite of him, has forced them into life, let him not fear to remove them to his cow-yard, or hog-pen. "Though lost," in the language of Mr. T., "to the spot on which they grew, and that spot instead of being benefited by the removal, has been positively injured, still they are not lost to some other poorer spot on the farm. Passing through the stables and hog-pens, they are broken down, and receive many enriching qualities, and are thus made much more valuable. Thus a beautiful system is constantly going on; whilst the growing crops are exhausting at one point, manure is in process of making at another to repair the injury." Our friend T. would advise his "*young friend*" W.—he thinks he must be a *young* man, or he would not blow off so much steam,—"to continue his reading about Lord Leicester and other great farmers, just as he now does; but with his reading, he had better let Tull's ghost alone, and attend a little more to the *practical* part of making and applying manures." We heartily wish them both, as we do all our agricultural friends, success in farming;—and to ensure this, let them diminish the weeds, and add to the manure heap.—Ed.

We have been favoured with a visit to the farm of Mr. Benjamin Webb, near Wilmington, and have examined the acre of corn which his son, Mr. William Webb, is cultivating for the purpose of making sugar from the stalks the present season. The rows are two and a half feet apart, and the plants not more than an inch or two distant in the rows; the seed was drilled with a machine of his own invention, and has produced a crop of unprecedented vigour and uniformity. The yield is enormous, and so far as present appearances can warrant the conjecture, is expected to yield a quantity of sugar equal to Mr. Webb's calculation, namely, 1000 pounds per acre. The ears of corn are now in progress of extraction, and the fact is proved, that this part of the process can be performed to *profit*, the worth of the ear and leaf attached, being of more value than the labour required. Owing to close planting, perhaps, there is not more than one stalk in forty or fifty, which exhibits signs of fruiting—whether they will be equally productive in the saccharine principle as those more perfect in their formation, is a question which Mr. Webb's indefatigable spirit for research is destined to solve. The stalks are already full of sap, and some of them are showing signs of maturity; the juice from these is vinous and peculiarly agreeable to the taste, and there is no doubt that it might be made, in its present incipient state, to yield a wine for present purpose, far superior to any that could be made from the grape in this climate. It would appear, therefore, that the question in future will be—not what else can be made from the "universal corn-crop," but "what else *cannot* be made from it!" As we heard one observe the other day, "Why, 'tis meat, drink and clothing, lodging, washing and mending! Affecting one's life, character and behaviour—our prospects and happiness in this life, and fitting us for that which is to come, by engendering an universal spirit of industry and improvement throughout the length and breadth of the land." Mr. Webb deserves the thanks of the community for his untiring zeal in the cause.—Ed.

Since the publication of our last number, we have received "The Dollar Farmer," a monthly quarto of 16 pages, published at Louisville, Kentucky, by Prentice and Weissinger, the publishers also of the Weekly Journal. It contains a large amount of agricultural matter, and it appears to us can hardly fail to prove a valuable acquisition to the reading farmer. They promise to "spare no pains, energy or expense, to make it the guide and exponent of the farming interests of the great valley of the Mississippi;" and "hope to live to see the day when it will visit every cottage" in that vast region! A pretty broad wish truly! But we don't object to its realization; particularly, if meanwhile, our own *Cabinet* shall work its way into the hands of every farmer on *this side* the Alleghany ridge, and into those of as many on the other side, as choose. We feel much gratified in observing the number of articles taken from our little *nursling*, and wish the publishers all success in their enterprise.

We have received within a few days, as we suppose, from D. K. Minor, agent of the New York Poudrette company, a copy of the U. S. Farmer, extra, in which are several letters from persons who have used his prepared article, and speak favourably of the results. This company has been several years in operation, and the Poudrette prepared from *night soil*, appears to have been extensively used to the east of us; but we believe not much in the vicinity of our city. It may be used on corn in the hill; turnips; potatoes; vines; or as a top dressing for grass. Will not our farmers more generally give it a trial? The price is two dollars a barrel, or three barrels for five dollars;—and the quantity used, from 10 to 30 bushels per acre.

Sale of Durham Cattle.

We call the attention of our readers to the splendid sale of improved short-horn dairy cattle—a selection from the unrivalled herd of James Gowen, Esq., Mount Airy—which will take place on the exhibition ground of the Philadelphia Agricultural Society, Rising Sun, on the Germantown road, three miles from Philadelphia, on Thursday the 8th September, at 10 o'clock in the morning. Wolbert & Herkness, auctioneers. Catalogues will be ready for delivery in due time, and the cattle may be examined on the ground two days previous to the sale.

The stock, consisting of imported cows and bulls; and calves, from Dairy-Maid, Pocahontas, Victoria, &c., by Colostra, Prince of Wales, and Leander, will afford to breeders a rare opportunity of increasing their herds of pure-blooded animals of the highest character, and of creating a separation, so as to prevent over-close breeding.

We hope, in the progress of this volume, to see and to *feel*, a large addition to our subscription list. When a subscriber wishes to discontinue his paper at the end of a volume, he has only to pay his arrearages, if there be any, and advise us accordingly. Should, however, any fail thus to advise us, and our papers lie in the office uncalled for, will postmasters be so kind as to drop us a line? We ask of them also, a further continuance of their kindness in franking remittances to us.

We have prepared a Table of Contents, which it will be perceived, embraces a considerable variety of matter, and we think will be found convenient to our readers.

The quantity of rain which fell during the 7th month, (July) 1842, was .... 11.8 inches.

This is the largest quantity of rain which has fallen during a month, since an account has been kept. Five inches and an eighth of an inch fell during a period of two and a half hours, on the evening of the 1st of July; and during the month it rained on fourteen different days.

Pennsylvania Hospital, Eighth month 1st, 1842.

☞ JOSEPH DRESSER,

Who has for several years acted as agent for our paper, particularly in Chester, and the adjacent counties in this state, has not been heard from for a long time. Our friends will *please Notice*, that he is no longer authorized to receive monies on our behalf. We would be glad to see him.

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Magnesian Lime.

Mr. Editor,—My time has been so fully occupied for several months, with the duties of a laborious profession, that I have not found leisure to pay my respects to your correspondents, who have noticed my essays on magnesian lime. But if they have been neglected, they have not been forgotten, and each may yet receive a word of remembrance.

There is one thing which seems to distress them sorely, both as respects Mr. Kinzer and myself, and which ought, therefore, to be attended to first; and that is, they cannot understand how we can argue so earnestly, or express ourselves so strongly, (thank them for the compliment,) unless we are interested in the burning and selling of magnesian lime, and hope by these means, to open a more extended market for it. Mr. Kinzer has already answered for himself, and I will briefly state, which I do most cheerfully, being always willing to relieve distress, that I own no limestone land nor limestone; that I am not engaged directly or indirectly, in the manufacture or sale of lime, either magnesian or pure,—and that I have no interest whatever, in the matter, further than a desire to see the truth established, and our agriculture improved. Hoping by this unequivocal disclaimer, to have satisfied them on this *important point*, and that hereafter they will turn their attention more to elucidating the subject in controversy, than to prying into my business, I will first notice your correspondent B. Webb, who I would thank to quote me correctly next time he tries his hand, and not make my *strong* language stronger by his version of it.

He and I, it appears, differ in opinion, with respect to the effects produced by magnesian lime; to this I have no objection, as every one has a right to his opinion, no matter how absurd; but when opinions, from their plausibility, are likely to be adopted, and if adopted would probably lead to practical error, we are very much inclined to inquire closely into the grounds on which they rest. This inquiry, I know, is sometimes very annoying to the opinion-manufacturer, but, nevertheless, must occasionally be submitted to. Now where are the proofs on which the opinion of your correspondent rests? Where are the *analyses* to show the real composition of the lime used? He tells us of a vessel load of lime from the Schuylkill that did not kill the grass where it was deposited; and of another lot of 500 bushels of *magnesian lime*, that destroyed every vestige of grass where a load of it was deposited. Now, I ask again, where is the evidence, that either of these *was* magnesian, or that they were not both so? He expressly tells us, that the Schuylkill lime was not submitted to any chemical operation, and does not say that the other was. Now, I have known repeated instances, where grass has been destroyed, by placing heaps of barn-yard manure on it; yet surely no one would impute this to magnesia, or to the deleterious nature of dung to vegetation, when used in proper quantities. Again, he says, "Magnesian lands produce no vegetation. The earths found in soils, are mostly silex, clay, lime, and magnesia; and where magnesia predominates, the land is always barren." But is not this the case when any of the earths, even his own favourite pure lime, abound, beyond a certain due proportion, which is of itself perhaps not very definable.

Are not shifting sands, and stiff potter's clay equally destitute of vegetation? Chalk is amongst the purest forms of carbonate of lime, yet chalky soils are notoriously poor. There are not, in all England or France, more hopeless or incorrigible barrens, than their chalky heaths, where the soil is composed in a great measure of the pure carbonate of lime. Many articles are very valuable as manures, when used in small quantities, yet ruinous to vegetation if applied largely. The inference then, that magnesia is deleterious to vegetation in all quantities and proportions, is not supported by analogous facts, with respect to other earths.

He says, many farmers in Delaware are very particular with respect to the purity of the lime they use; "One of them informed me, that some of the Schuylkill lime is so impregnated with magnesia, that it is not worth buying; and other kinds so pure, that you cannot buy too much of it." Then follows the stereotyped authority of Tenant and others, "that magnesian lime is exceedingly injurious to land." Now, if this knowledge or opinion of these farmers, is the result of a vigorous chemical analysis, conducted by themselves—for it does not appear that any body else examined it—I must congratulate them on their advancement in chemical knowledge; such attainments were certainly very rare among such farmers as I mixed with some years ago; but that was in the *benighted* county of Chester, where it seems that the farmers long cherished an inveterate prejudice, against all book-learning. But if they are mere opinions, formed without any knowledge of the true composition of the article they were using, what reliance can be placed on them as a foundation for, or proofs in support of, a very important theory? It is against attempts to base a theory on mere opinions, assumed as facts, and from such a theory deducing very important practical consequences, that I have all along been contending; if in doing this I have used strong language, it was not for the purpose of irritating any one, but to arouse attention, and direct inquiry to the subject, and bring theory to the test of facts and practice, closely and vigorously investigated. We have had *namby-pamby* essays enough on the subject, leaning on the authority of great names, and meaning anything or nothing, just as you please. My design was to state explicitly for what I was contending, that my views need not be misunderstood, and if erroneous they might be shown to be so; but in this I may have failed. I have stated it as a fact, that immense benefit has been derived from the use of lime in agriculture, in South-eastern Pennsylvania, and parts adjacent, and that the whole improvement in agriculture, so far as lime is concerned, is due to magnesian lime and to none other. I also stated it is as a probable conjecture, though not an ascertained fact, that magnesian lime was better, or at least more economical, for some purposes of the farmer, than pure lime.

The first of these propositions your correspondents admit, with a salvo, however, that the improvement might have been greater, if pure, instead of magnesian lime, had been used. Upon the second point then, the whole controversy turns: Is, or is not the great body of the limstone of South-eastern Pennsylvania, of the magnesian variety? All the authorities within my reach, go to prove the affirmative of this proposition. Judge Cooper, many years ago, analyzed several specimens from the great valley of Chester and Montgomery counties, collected between Coatesville and the Schuylkill; all or nearly all of which proved, if my memory serves me, highly magnesian. Several years afterwards, the late Dr. Joseph Coates of Downingtown, analyzed several specimens from that neighbourhood, which all proved of the same character. The analyses of four specimens from the same district of country, contained in page 309 of Vol. 4 of the Cabinet, show them all to contain magnesia; three of them, however, in but small proportions; those, however, it may be remarked, are from quarries which have not been largely used for agricultural purposes; while the other containing 41 per cent. of magnesia, is from a quarry whence immense quantities have been taken for those purposes. Professor H. D. Rogers, the state Geologist, in a letter which I received from him some time ago, states explicitly, that "a very large excess of magnesian limestone, compared with the pure carbonate of lime, exists in the counties of Lancaster, Chester and Montgomery;" and then adds, "indeed, if I were to confine myself to the great valley of Montgomery and Chester counties, I might say, that limestone, free from magnesia, is of rather rare occurrence; the quantity of magnesia, varying in different layers of rock, from 5 or 10 to 40 per cent. The proportion of magnesian limestone, in the secondary blue limestone of the Kittatiny valley, and the Pequea valley, &c., of Lancaster county, is not so great, yet it is difficult to find a quarry in which it does not abound." He further adds, that many of the limestones long in use by the farmers of Europe, are as magnesian as our own.

Your correspondent, C. Taylor, thinks I use an expression two strong entirely, when I say, that whatever part of the improvement in South-eastern Pennsylvania, is owing to lime, is owing to magnesian lime, and none other; but is it stronger than the above authorities will warrant in the absence of all evidence to the contrary? It was only of its general character I spoke. It cannot be expected that we should analyze every stone or layer of rock that has been used, but only enough to show that magnesia does generally and largely abound.

With respect to the effect produced by any particular lot of lime, we are always willing to take the opinion of intelligent farmers, because such things must always be a matter of judgment; but for the composition of the lime used, we are not to be satisfied with any thing short of a rigid analysis.

If those residing in or near the limestone districts above mentioned, and differing in opinion with me as respects their magnesian nature, wish to bring this controversy to a close, they may readily do so, and at the same time add to our stock of useful knowledge. Let them make a tour through the districts, visiting all the quarries from which lime has been obtained in any considerable quantities for agricultural purposes, and select specimens from each, particularly of those strata which produce a lime held in the best estimation, and let the specimens thus obtained, be submitted to a careful analysis by some competent chemist. The results of such an investigation, when made public, ought to, and will, in the minds of all reasonable people, settle the principal point in dispute. S. Lewis.

Pottsville, July 20th, 1842.

Butter.

The great point in making good butter, and that which will keep, is the freeing it from all buttermilk; and if everything else is well done, if this point is overlooked, good butter is impossible for any length of time. The mixture of milk in any degree with the butter, is sure to produce an unpleasant taste to the butter; and the entire freedom from this constitutes the grand secret of making good butter. There are many who think washing butter with water incompatible with retaining the rich flavour; but if the water is cold and pure, it is scarcely possible anything should be washed away, the buttermilk which destroys the flavour of all butter excepted. Besides, the best butter in the world, and that which in all markets commands the best price, viz: Dutch butter, is invariably made in this way; and where the example has been followed by others, it has rarely failed of success. If any, however, doubt the propriety of washing butter, they may use any method they choose, provided the milk is separated perfectly. Perfectly free from the substance that causes it to assume the putrid taste of bad butter, it may be kept with almost as much ease as tallow. Solidity in packing, clean, sweet vessels, and a low temperature, will insure its keeping for any reasonable time. Let no one expect good butter, however, so long as coarse impure salt is used, or a particle of the buttermilk is allowed to remain in it.

Domestic Annals of Butter.

California Wheat.

The Augusta (Georgia) Constitutionalist, gives the following description of this new variety of wheat, recently introduced in that state, a sample of which was left at that office:

Having obtained from Mr. Thomas Speering, of Abbeville, S. C., a small quantity of his California wheat, I planted it the first and middle of October last. In all, I had about one thousand bunches to stand, which have or will produce at least twenty thousand heads, averaging one hundred and fifty grains to a head. The grains are very large and of a beautiful yellow tint, rich and sweet, and no doubt will make the best of flour. I have about seven square rods of ground, which will make between five and ten bushels, which would be over a hundred bushels to the acre. And it is to be noticed, that while most of the common wheat throughout this country, for the present season, has been greatly injured, and some of the crops have been utterly ruined by the rust and smut, this California wheat has been free from either.

The Husbandman.—By John Sterling.

Earth, of man the bounteous mother,
Feeds him still with corn and wine;
He who best would aid a brother,
Shares with him, these gifts divine.

Many a power within her bosom,
Noiseless, hidden, works beneath;
Hence are seed, and leaf, and blossom,
Golden ear, and clustered wreath.

These, to swell with strength and beauty,
Is the royal task of man;
Man's a king, his throne is duty,
Since his work on earth began.

Bud and harvest, bloom and vintage,
These, like man, are fruits of earth;
Stamped in clay, a heavenly mintage,
All from dust receive their birth.

Barn and mill, and wine-vats treasures,
Earthly goods, for earthly lives,—
These are Nature's ancient pleasures,
These her child, from her, derives.

What the dream, but vain rebelling,
If from earth we sought to flee?
'Tis our stored and ample dwelling;
'Tis from it the skies we see.

Wind, and frost, and hour, and season,
Land and water, sun and shade;
Work with these, as bids thy reason,
For they work, thy toil, to aid.

Sow thy seed and reap in gladness!
Man himself is all a seed;
Hope and hardship, joy and sadness,
Slow, the plant, to ripeness, lead.

Every cultivator of the sugar-beet or turnip, ought to raise his own seed, otherwise he will be liable to imposition. And yet, occasionally, seed should be changed.

For the Farmers' Cabinet.

Human foot-prints in solid Limestone.

In an article written by Dr. Owen, of Indiana, which we find in the July number of Silliman's Journal of Science and Arts, we have some accounts of human foot-prints found in solid limestone rock, which have been quite interesting to myself, and afforded matter for speculation to many others.

The slab itself containing the two human foot-prints in question, is a ponderous mass of solid limestone, weighing upwards of a ton. It was originally found on the margin of the Mississippi, at St. Louis, nearly opposite the centre of the city. It was quarried in 1819, for Frederick Rapp, of New Harmony, but is now in possession of Dr. Owen, whose father in 1824, purchased that estate of Rapp. Paul Anderson, in a letter dated October 11th, 1841, to "Mr. Baker, Mr. Rapp's man of business," says, "the year after I was located in St. Louis, during the extreme low water of the Mississippi, I was shown the imprint of human feet, that was in the limestone rock, on the very margin of the river, and which had been only seen by the old inhabitants there, very few times: as it was said by them that it was not more than once in the period of ten years, or so, that the river fell to its then stage. There was no rock lying on it, as it was the lower ledge of the stratified limestone that reached by steps to the bluff of limestone rock, that ranged along the foot of the river lots of the city." "A Mr. John Jones, who claimed a sort of ownership in the rock, as being the first discoverer of it *that season*, was employed by me to cut out the slab for Mr. Frederick Rapp, who was then at St. Louis on a business visit. I paid Jones, to the best of my recollection, one hundred and eighty dollars for the slab, and shipped it round to New Harmony, to Mr. Rapp. Previous to its being sent away, there was an offer made of five hundred dollars for it, by a '*virtuoso*,' from some of the eastern cities; and in consequence of this high estimate of its value, there were many of the citizens strongly disposed to prevent the slab being sent away from the city." Mr. Schoolcraft, who in 1822, first appears to have called attention to these singular impressions, says they are "those of a man standing erect, with his heels drawn in and his toes turned outward, which is the most natural position. The distance between the heels, is 6¼ inches, and between the toes, 13½ inches." The impressions are those of feet unaccustomed to a close shoe, the toes being much spread, and the foot correspondingly flattened. The length of each foot is 10½ inches, and the width across the spread of the toes, is 4 inches, indicating a stature of common size.

Colonel Benton, an eye witness, in a letter to Schoolcraft, says, "the prints were seen when the country was first settled, and had the same appearance then as now. *No tradition can tell anything about them.* They look as old as the rock. They are not handsome, but are exquisitely natural, both in form and position." The greatest depth of the impression is about one sixth of an inch. Colonel Benton supposes them to be the result of human labour, executed about the same period of time when those enigmatical mounds upon the "American bottom," and above the town of St. Louis, were constructed. And Samuel Bolton and several other distinguished naturalists, who together critically examined the specimen in 1826, agree in the opinion of their artificial origin, considering the working of them out, to have been less difficult than the fabrication of many of our native vases. Schoolcraft and Governor Cass, however, formed upon the spot a very different opinion. They think that "every appearance will warrant the conclusion, that these impressions were made at a time when the rock was soft enough to receive them by pressure, and that the marks of the feet are natural and genuine!" Mantell, a distinguished geologist of England, coincides in opinion with Schoolcraft, as to the true fossil character of the foot-prints; declaring that no doubt exists in his mind, that they are the actual prints of human feet in the soft sand, which was quickly converted into solid rock, by the infiltration of calcareous matter.

With opinions so variant, and such names arranged on either side, how shall we decide satisfactorily to ourselves, whether these impressions be natural or artificial? Facts are stated, which we have not room to embody in this paper, well calculated to make it a matter of much curious speculation. Dr. Owen, "after a close inspection of the slab itself, a careful examination into its geological position, age and origin, and a patient review of the arguments of the various writers on the subject," comes to the conclusion, that "the impressions in question, are not fossils, but an *intaglio* of artificial origin." We close this article with his two concluding paragraphs.

"We must admit the probability, that the aborigines of Northern America, were unacquainted with the use of iron tools, yet by water itself in the course of time, an impression may be made in the hardest rock. The hardness of flint is 7°, while that of limestone is but 3°. Where is then the improbability that the patient Indian, who, in the intervals of war, or the chase, is known to spend months in carving some favourite weapon or frivolous amusement, should have gradually hollowed out these foot-prints? How incomparably easier such a task, than to produce those complicated ornaments on altar-pieces and idols in Central America, which the enterprise of Mr. Stephens has recently submitted to the inspection of the curious? The western hemisphere once produced its sculptors, persevering, skilful, even tasteful and delicate. If they have left their handiwork in Guatimala and Yucatan, why not also on the banks of the Mississippi?

"The slab which is the subject of these inquiries, was quarried, it will be recollected, from a ledge of rock at a point on the very edge of the stream, when at its lowest stage. The present site of St. Louis, it will also be borne in mind, was a common gathering place of the neighbouring Indians, as the adjacent mounds abundantly testify. May we not, then, with some degree of confidence, hazard the conjecture, that our impressions were an aboriginal record, of extreme low water, as observed by the Indian race, at their favourite resort on the banks of the father of waters—their own unequalled and magnificent Me—scha—si—pi?" L. N.

For the Farmers' Cabinet.

Economy.

Messrs. Editors,—According to the reports from all parts of our vast country, it would appear that the crop of wheat, rye, oats and grass, have been good. The wheat and rye will probably not prove quite so heavy as was at one time anticipated; the rust having at a late period in the season, done considerable injury. In some districts of Maryland and Virginia, this injury was very serious. Still the crops above mentioned, throughout the country, will be full average ones. And I know nothing more thoroughly calculated to revive the drooping aspect of the times, than good crops, *economical habits*, and cheerful spirits. Should the autumn add to the summer's abundance, and give us a full crop of Indian corn, that *prince* of grains—and should the cotton and tobacco crops of the South prove also luxuriant, our garners will be overflowing, and we may hope, that however the means of many may be inconveniently reduced, the prospect of suffering will be greatly diminished, and we need have little fear of *starvation* threatening us, by the side of *poverty*. The wheat harvest in England has promised favourably, and unless a foreign market shall open extensively, the products of our fields must necessarily command low prices. With abundance in the market, a limited demand, and withal, a deranged and crippled state of our monied institutions, and money matters generally, it will of course be more difficult than it has sometimes been, to make cash sales of our grain, beef, pork, &c., that will at all pay the expense of raising and getting them to market. Wages continue high, notwithstanding we hear so much said about the *thousands* that are thrown out of employment. We have all, however, long ago observed, that the price of labour is slow to fall, though the products of it may have greatly diminished in value. What then is to be done? With overflowing garners, and all the *potentialities* of living, is the farmer to be obliged to hang his head in cheerlessness? We trust not. The farmer who is in debt, or who is barely out of debt, or living on rented land, and depending entirely upon the yearly products of his farm,—if he would rise above the times, and avoid the embarrassments and perplexities of a city business, must bring all his wits into play; put on his *studying cap*, and *practice retrenchment.* He must study *economy* in every *particular.* I know from experience, that a system of *cash* payments, for all we buy, is among the very best, and most efficient incentives to this necessary virtue. The good credit and fair character of many a farmer, have placed him upon his *last legs*, and their abuse has proved his ruin. I don't mean that a farmer shall *never* make use of his *credit:* but it is so easy to buy what we *think* we need, when *pay day* is put off for six months, or a year, that the temptation to purchase what we might well do without, is oftentimes so strong, that its indulgence leads to the most serious results. Let us then pay the *cash* for what we buy, and we will save in the purchase, five or ten per cent.;—we shall often avoid buying what we only *imagine* we *need*, and spare ourselves the harrassments of *unpaid* bills—the *chagrin* of working for a "dead horse." Our better half will examine the old coat and see if it won't bear turning—we'll make the old carriage jog along for another year or two, or three; and when the *younkers* ask for some indulgence they can well do without, we'll put our hand in the pocket, and finding it *minus*, bid them *wait awhile.* There are a thousands ways to economize in our expenditures, without diminishing the comforts of a family. We shall thus find it convenient to educate our children properly, and to furnish them with that food for the mind, which really adds to life's comforts, and gives respectability to their calling, whatever it may be.

Let none mistake me, and suppose I would plead for a *false economy*, that would save at the *spigot* and waste at the *bung*. Such, for instance, as raising *poor* stock, when *good* might just as easily be had; keeping on hand miserable tools, that murder the business and cause more delay in the using, than the difference of price between them and good ones: or in taking up the idea, that we can't afford, these hard times, to take an agricultural paper! No, no, I advocate no such *mismanagement;* I hold that good stock and good tools, are cheaper than poor ones; and that no *implement* on the farm, of ten times its cost, will more conduce to the farmer's interest, than a good agricultural paper — the Cabinet for instance. I plead for such a care in our expenditures, as will restrain us within our means—a care that will limit us to the *necessaries* and *comforts* of life, until we can really afford its *luxuries*. A Learning Farmer.

For the Farmers' Cabinet.

The "Day's Ploughing."

Mr. Pedder,—On receiving the three last numbers of the Cabinet, I did not even wait to stitch them, in my anxiety to see the account of the "day's ploughing," of which notice was given in the Cabinet for April, page 294. At first I supposed the silence of the Cabinet to be in consequence of the committee not having made their report; but so much time having gone by, and nothing said, I begin to fear that the ploughing match has again proved a failure. I shall feel myself obliged if you will inform me by letter, or through the pages of the Cabinet, if you think proper, concerning the "day's ploughing;" giving your opinion of the merits of the "*centre draught plough*," as I wish to procure a plough suitable for turning under a crop of clover preparatory to sowing wheat. Some with whom I have conversed concerning this plough, object to it on account of its turning the furrow flat, believing that the soil will lay too dead and heavy to bring good crops; but I should like to know your opinion concerning that matter. I had made up my mind to obtain one, but the silence concerning that "day's ploughing," has somewhat shaken my resolution. A plough much in use in this part of the country, is patented by Wiley, of this (Chester) county, which answers very well for stubble land, but is not well calculated for turning sod, as it breaks the furrow-slice, pitching it forward, and leaving the land in a very rough, uneven state. Another plough, which is much used for sod, is a barshare plough, made altogether of wrought iron, except the mould plate, which does good work, laying the edge of the furrow-slice on the one which preceded it; but requires great strength of team. Another plough, which is used for all kinds of land, is a barshare plough, known as the *Stewart* plough, being made by two brothers of that name, and is, I believe, the best in this part of the country.

With best wishes for the success of the paper of which you are editor, and by which I have been benefitted the subscription price many times told, I subscribe myself, your friend, John Chalfant.

McWilliamstown, Pa., Aug. 5, 1842.

To Mr. John Chalfant,—Sir, your favour I received in due course, and would have answered it immediately, but for the wish to have it in my power to speak more decidedly on the subject of its contents.

The "day's ploughing," did not "come off" in the way that had been anticipated; and for the following reasons, which are strictly *facts*. In the first place, the ploughs made expressly for that day's trial at the manufactory in Boston, were constructed after a new pattern, which enhances their value four-fold; namely, with a shifting point and wing, which, simply by turning a single screw, can be reversed in a moment, thus forming a self-sharpening instrument. But this alteration threw them out of *going trim*, creating a bias towards the furrow; and as this contingency was unforeseen and unexpected, the precaution to test them at the manufactory was neglected; they were despatched in that state, and arrived in Philadelphia but just in time for trial, on land very unsuitable for the purpose; very wet from continual rains, part fallow and part sod in the length of every furrow; so that the plough when set for turning sod, was not the most suitable for turning fallow; when they were found not to operate so well as their sanguine friends, myself among the number, had anticipated. The fact is, in their then state, they required guiding; and if a centre draught plough will not go *alone*, it is not set right in some of its parts. The trial, therefore, as has been said, was not satisfactory; but as the cause of the failure was at once perceived, and admitted of being easily rectified, no report was made by the committee at the time, and the ploughs were sent back to be adjusted. But before this was done, one of them was taken to the farm of Mr. B. Cooper, of Jersey, that an examination of it might be there made at leisure, and the result was confessedly unsatisfactory—the plough would not *go alone*, although the work done by it was very good. In less than ten minutes, and without the cost of a single cent, the adjustment of the parts was made; and this is one of the ploughs which I selected to bring with me to this place for exhibition, and for my own particular use; and here the work performed by it is *perfect*; for with the aid of a pair of horses, a heavy lay, that had been fed all summer by horses and cattle, and covered with a coat of manure, has been turned to a good depth, and so completely broken and pulverized, as to admit being sown with ruta-baga—a perfect garden-mould culture—the team turning an acre and a half a day's work. I find that a single turning of the soil with this plough, is quite equal to a ploughing and harrowing with any other. The plough most in use in this part of the country, is "Miles's," which, by means of constantly sharpened irons, will cut the soil as clean as a piece of cheese can be cut with a knife, laying the land over so smooth, that it falls as closely as it lay before removal, leaving an edge of sod in every interstice between the furrows, to grow away with redoubled vigour: but the "centre draught plough" requires no sharpened irons, for the work is performed not so much by *cutting* as by *breaking;* the share penetrating the earth and lifting it up, so that in the act of falling, it is separated into a thousand pieces; scattering the pulverized mould without sod, exactly into the interstices, or seams between the furrows, which, however, are not turned over *flat*, but at a proper angle to be operated upon by the harrows to fit it for sowing, in the most perfect manner imaginable.

I have two of these ploughs running every day, greatly preferring them with wheels, finding that a wheel saves the labour of half a horse on a pair, and being still a greater relief to the ploughman; the wheel passing over hillocks and hollows, without at all affecting the clean and smooth state of the bottom of the furrow; the most uneven surface, arising from former bad ploughing and harrowing, being thrown by it, at a single operation, into a perfectly level bed, and with far greater ease of draught than that required by any other plough whatever—ease of draught being a peculiarity for which this plough has received many premiums; one of the last, to the amount of $100. I have now, therefore, no hesitation in recommending the "centre draught plough;" convinced as I am, that a farm of 80 acres of land, managed entirely with it, can be made as profitable as a farm of 100 acres, kept under the tillage of any other; the expense of after-culture being greatly lessened by its use, and the saving in the smith's bill, amounting in the year to a great portion of the first purchase money. It must be observed, the land when broken up dry with this plough, will remain more light and pulverized the whole year after; not falling heavily together again, as when turned with the "Wiley," the "Miles," or other sharp cutting ploughs, that are valued for what is really a defect in the operation of cultivation.

If a piece of chain, six or nine inches in length, be added to the link at the clevis, the plough will be found to go much steadier, not being so readily affected by the unequal working of the land-horse; a more equal pressure on the wheel is thus obtained, and consequently a steadier power of resistance will be offered to the furrow while in the act of turning, by which it will become more broken, and be laid more compactly over. It may again be remarked, the *undermining* of the land—the principle which forms the ground for a patent in this plough, facilitates, in a remarkable degree, the turning over of the next furrow; leaving a portion of the sod, which would otherwise be thrown into the interstice, to be carried over by the next furrow and be deposited at the *bottom* of the trench—a consideration of the greatest moment. The principle upon which this plough operates, is perfectly different to that of all others; it requires to be studied and to be practised upon, before it can be understood; after which, however, there can be no question as to the result—its very general adoption by those *who have an interest in the proper cultivation of the soil.* When used with a wheel, it must be remembered, that to make the plough take a *deeper* furrow, the handles must be *pressed down*—to go shallower, they must be *lifted up:* as a swing plough, this order is reversed.

I am, sir, respectfully,
James Pedder.

Eden-Hill Farm, 15th Aug. 1842.

Canker in Trees.—One of the causes of canker and immature fruit, even in orchards, is the coldness and dampness of the soil. In a cankered orchard, it was found that the roots of the trees had entered the earth to the depth of three feet, and during the summer months, while the average heat of the soil at 6 inches below the surface was 61°, at 9 inches it was only 57°, at 18 inches 50°, and at 3 feet 44°. Measures were taken to confine the roots to the soil near the surface, and the consequence was, the disappearance of the canker, and the ripening of the fruit.

To the Editor of the Farmers' Cabinet.

The Thorough Cultivation of the Soil.

Sir,—I am glad to find that increased regard to the cultivation of the soil, is likely to command attention amongst us. No one living can be more sensible of the extreme importance of manure, in all the different stages of husbandry, than I am, or of the necessity of returning to the soil in some way or other, the strength, of which we are robbing it; but I am quite convinced, that a great proportion of this may be accomplished in the shape of extra cultivation; although I might not, perhaps, be prepared to go quite so far as Jethro Tull, who, it is well known, declared that the only use of dung was to cause a subdivision of the earth, which could as well be performed by cultivation and minute pulverization, as by manure. Still he had the experience of years for the ground of such assertion, during which he raised the most exhausting of all crops, namely, wheat, on the same land in succession, and continued to increase its quantity as well as quality to the end of the chapter. But I am quite prepared to believe, that one half the manure, with double or treble the quantity of culture, would be found far more profitable than the mode in general practice amongst us—that of merely turning up the soil with a large and wide furrow, trusting to the effect of a harrowing for pulverization—which cannot be allowed to form that species of cultivation which is beginning to interest the enlightened tillers of the soil, and the effects of which will be seen and felt in the future state of the land, as well as in the health and well-being of the crops. Now, in the subsoil-plough I see an auxiliary, which will be the means of saving both labour and expense: and cannot but wonder what would have been Tull's estimate of such a contrivance to pulverize the *subsoil*, at the time that he was, by repeated ploughings, harrowings and rollings, doing all in his power for the benefit of the surface-soil; but such an acquisition was reserved for us of the present day, and by it and his experience, we may now consider ourselves competent to set a high example in the science and art of the proper culture of the earth; performing the operation with about one-half the labour, and three times the pleasure and profit, that are generally experienced.

What has been said, however, does not, I presume, so much apply to the cultivation of the wheat crop in this country—for I have ever found that the best wheat is raised on clover-lay land, after once ploughing—the seed being sown after the land has had time to settle down after ploughing, and received a shower of rain, and become dry again, so as to harrow kindly. And I have strong reason to believe, that such a course would go far to rid us of the Hessian fly, as well as, in a measure, the rust; both these disorders being encouraged, if not engendered by a flashy and premature growth of the crop. At all events, the best crops of the present year, are those that have been grown after clover with one ploughing. But the perfection of this culture has not yet been attained, for the manure for the wheat crop ought always to be given as top-dressing to the clover in early spring, with compost, prepared with lime as one of the ingredients, in as great abundance as possible; after which, one crop of hay may be taken, and the second crop fed; or both crops may be mown for hay—the subsoil-plough, let down to the greatest depth, following the common plough, taking a deep and narrow furrow, turned well over, so as to completely bury the clover sod—then we shall have a right to expect to reap very different crops, to those which we now see—the land being renewed, and capable of vieing with "the rich lands of the west."

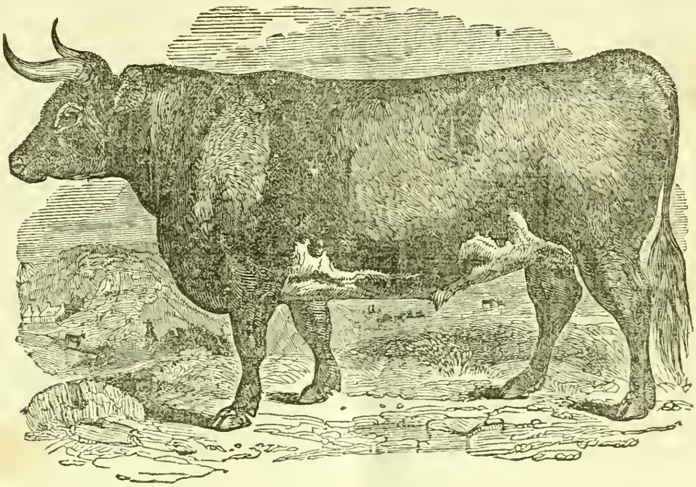
Jacob List.

July 21, 1842.

Usefulness of Toads.

Editors of the Cultivator.—I will take the liberty of stating to you some facts, relative to the protection of garden vegetables from the attacks of the cut worm, and some others of the same tribe. Some years ago, when dressing my garden, I discovered a toad nestled under a plant, and shortly after hoed up a cut worm, which I shoved near the toad, who snapped him up as soon as he got sight of it. The thought occurred to me, as the toads and worms both come out at night in search of food, it would be good policy to gather up the toads and put them in my garden to catch the worms. I did so, by catching all I could find about my door yards, hopping about at night-fall, put them in my garden, and was not troubled with the worms that season. I have repeated the experiment with the same success ever since. I consider it also an act of humanity to keep them out of the boys' way, who are apt to torment the poor creatures, when hopping about in search of food. If the heads of families would prevent their small children from destroying the toads, and larger boys from shooting and pelting with stones the birds which feed on worms and insects, they would come around our premises, and do a great deal in relieving us from their depredations on our fruit and gardens. S. M'Coy.

April 20th, 1842.



THE PEMBROKESHIRE OX.

Wales.

Great Britain does not afford a more useful animal than the Pembroke Cow or Ox. The great majority of this breed are perfectly black, with beautifully turned white horns, with black tips; a few have white faces, with a little white about the tail or udder. The general form of the cattle betrays, undeniably, their early origin. They are shorter in the leg than most of the Welsh breeds, and have round and deep carcases, with a peculiarly lively look, and majestic air while walking. The hair is rough, but short; and the hide is not thick, being excellent handlers. The bones, although not so small as in the improved long-horns, are far from large; and the Pembrokeshire cattle mingle, in a considerable degree, and as far, perhaps, as they can be combined, the two opposite qualities, of being very fair milkers, with a propensity to fatten; the meat, even of a half fatted beast, being generally beautifully marbled; the finest of them are equal in value for beef with the Scotch cattle, and some epicures prefer it; while they are so hardy as to live where those of many other breeds would starve; and will thrive most rapidly, and outstrip most others when they have plenty and good pastures. On trial, however, the Glamorganshire breed might get the start of the Pembrokes in the best pastures, but on rough and barren tracts, the advantage would be found to be greatly in favour of the Pembrokes; and they are therefore, purchased very largely by the Glamorganshire farmers at the time of the great Welsh fairs, when many thousands are sold for very distant parts, and of all ages. The Pembroke cow is perhaps the best cottager's cow in Britain; while she is equally profitable to the large farmer; the breed attaining large size and magnificent proportions; while the ox, like the Devon, is a speedy worker, and honest withal; fit for the road as for the plough, and when taken from work, fattening speedily. Great numbers are brought to the London market, standing the journey well, and rarely disappointing the butcher; much oftener proving better than appearances would indicate, and becoming ripe at four years old; being very good on the chine and loin; round and long in the barrel, with a rich wave in the hair, and an oiliness of skin, which ever denote thriftiness, and bearing a high resemblance to the Kyloes.

The town of Narberth, in Pembrokeshire is famous for its fairs for these cattle; and it is worth a journey of a hundred miles to see, within an hour of the opening of the fair, the road leading out of the town covered with many hundreds of this magnificent cattle, wending their way to the deep feeding valleys of Warwickshire, &c., in preparation for the London markets; their white horns and flowing tails, rendering them conspicuous above all other breeds.

Lard Oil.

The following account of this interesting manufacture is from the Cincinnati Gazette.

"*Lard Oil.*—We are glad to find that the manufacture of this article is beginning to attract public attention.

"We have in our city three manufactories for making this oil; and, on inquiry, we learn that they are unable to supply the demand for it. R. W. Lee & Co. shipped, last week, fifty barrels of it (averaging 2,000 gallons) to New York; and another firm informs us that they cannot fill their Eastern orders.

"This new manufacture is destined, we think, to exert a very beneficial influence upon the West. It has already enhanced the price of lard, and must hereafter increase the value of swine. A reference to a few proofs will best illustrate these facts, and show the great importance of this manufacture to our city.

"R. W. Lee & Co. use, every twenty-four hours, *sixteen barrels* of lard at their lard oil establishment. It requires portions of two hogs to make a keg of lard, and portions of ten hogs to make a barrel. We killed, last year, about one hundred and eight thousand of these animals in the city, and the calculation is, that about the same number are killed out of it; so that we may put down the number of them brought to our market, at two hundred and sixteen thousand. From these data, it will be seen, that one manufactory uses up the lard of one hundred and sixty hogs every twenty-four hours; or one thousand one hundred and twenty a week; or four thousand eight hundred a month; or fifty-eight thousand two hundred a year! So that a few manufactories of this kind, would consume portions of all the swine that the farmers in our neighbourhood could raise!

"Sperm oil has heretofore commanded a good price, and found a ready sale. In 1840, according to the returns, the quantity of sperm and whale oil exported was about five millions of gallons, while the consumption at home amounted to about six and a quarter millions. But, from a statement in the Journal of Commerce, we find that this trade has almost ceased, owing to the fact, that 'the hogs have run the whales fairly out of market.' Nor is there any reason to doubt, from the quantity of swine which the West has, or can raise, that lard oil can be made to take the place of the sperm and whale oil, both at home and abroad. If so, what a new and wide field of wealth is opened to our agriculturists!"

It is said, that all *wine stains* in silk or cotton, can be speedily removed by the application of common table salt.

Clover.

It has been asked, perhaps a thousand times—Why will not clover succeed in Mississippi? It has been tried, perhaps by every farmer in the state who ever had a notion of stock raising; and although in a few places we have seen it succeed, yet generally it is well known that no treatment it has yet received has prevented its totally failing. The true cause of this failure, we think, is brought to light in Mr. Ruffin's report to the state board of agriculture of Virginia. He there says, that in that state it was almost impossible to raise clover, until the application of lime was adopted. Even on the richest and lightest natural soils and on heavily manured lots and cowpens, clover was only a precarious and short lived crop. Field culture of clover, except on a few peculiar soils, so as to make it valuable as in other states, as a fertilizer in rotation, was altogether out of the question. "But after liming or marling, clover," he says, "grew much better on the few places on which it only could be raised at all before; and it also became a crop as sure as any other and *naturalized*, as it were, on the before foreign and altogether unsuitable soils." Even on very poor land, the application of lime enabled the farmers to get a good *stand* of clover; and though on such soils it would not grow very rank, yet the lime enabled it to keep possession of the ground, so that by the application of putrescent manures, the heaviest crops could be realized.—*South Western Farmer.*

Starting Children in the World.

The following extract from the works of a living writer, is replete with sound philosophy and common sense. It is well worth the attention of parents.

"Many an unwise parent labours hard and lives sparingly all his life, for the purpose of leaving enough to give his children a start in the world, as it is called. Setting a young man afloat with money left him by his relatives, is like tying bladders under the arms of one who cannot swim; ten chances to one he will lose his bladders and go to the bottom. Teach him to swim, and he will never need the bladders. Give your child a sound education, and you have done enough for him. See to it, that his morals are pure, his mind cultivated, and his whole nature made subservient to the laws which govern man, and you have given what will be of more value than the wealth of the Indies. You have given him a start which no misfortune can deprive him of. The earlier you teach him to depend upon his own resources, the better."

The Family of the Goodenoughs.

"Their characteristics are ignorance, obstinacy, and self-conceit, existing in so great a degree, as to bid defiance to all attempts at enlightening their minds in regard to any branch of husbandry; for they appear, wisely to believe themselves perfect masters of the whole. They have such an utter contempt for all agricultural books, that nothing could persuade them to subscribe for an agricultural paper, and still less, to read one; for they declare that these papers contain nothing but a parcel of evils, and visionary notions. And if any of their neighbours who study such works, should happen to fail in their experiments, it is immediately ascribed to *book farming*, whilst all the instances of their success, are attributed, by these wiseacres, to what they call *luck*—a word of such comprehensive meaning in their vocabulary, that it suffices them to account for nearly every thing which occurs, either to themselves or to others. One of their favourite opinions is, that all kinds of farming stock, except horses, are endued with a sort of natural sagacity or instinct, which enables them to choose for themselves in bad weather, much better shelter than their owners can provide for them. Hence, their cattle, hogs and sheep, in almost every case, are left to shift for themselves, and the consequences are such as all men, but the *Goodenoughs*, can easily foresee. Would you seek for occular proofs? Look at their farms about the months of March or April, and on most of them you will behold a spectacle, sad enough to move the pity of any person who can feel for brute beasts, subjected by the reckless inhumanity of man, to an almost constant state of severe suffering. The evidences of this inhumanity, this suffering, are to be seen in hogs, half-dead with the mange, contracted by sleeping in the hot litter of the stables, and starving the greater part of their time;—in sheep, that long before shearing time, have saved nearly the whole of that trouble to their Goodenough owners, by dropping a large portion of their fleeces in the fields, and have prevented an overstock of lambs, by yeaning them in situations convenient to the politic troop of buzzards, which may always be seen hovering over them at such times, in greedy anticipation of their customary feasts; and in *cattle*, with their backs arched as much as their spines will admit, and all four feet drawn under them, to balance themselves, as it were, lest a stronger wind than common, should place them in a situation which we call, "being on the lift."

James Garnett.

Dana's Muck Manual.

We find in the July Number of the American Journal of Science and Arts, edited by Professor Silliman and his son, a notice of "Dana's Muck Manual, for farmers." We have already, several times referred to this work, in the Cabinet, and have pleasure in again bringing it before our readers, by inserting the introductory and concluding paragraphs of the article from Silliman's Journal.

"Dr. Dana has long been known, as one of our most accurate and learned Chemists; and his professional duties, as connected with the large calico printing establishment at Lowell, have led him to make many careful experiments, upon subjects bearing directly upon Agricultural Chemistry. He has written this work, therefore, in the full maturity of experience, and judgment. The statements and reasonings are not those of a novice; but we see at once, that he has looked at every point, again and again, and that he gives us the final conclusions, of long and patient examinations. It is well known that on many points, the theory of this science is not fully settled. The author, however,—and this we regard as a most valuable part of his labours, believes that these different views are of very little practical importance. His own peculiar opinions he states with great frankness, and merely gives a summary of arguments, on which he founds his conclusions with scarcely any personal allusion to those of different views.

"We can cordially recommend this work to our agricultural friends, for its practical character. It is not saying too much to assert, that Dr. Dana has done for the farmer in this treatise, what Dr. Bowditch did for the sailor, when he published his Practical Navigator. In this respect, this treatise contrasts strongly with such a work as that of Liebig on the Organic Chemistry of Agriculture, &c., which notwithstanding its originality, and the philosophical beauty of its theories, is apt to make the impression upon the farmer, that he is not at present to expect much from agricultural chemistry but ingenious conjecture. We are sure, that Dr. Dana's work will remove this impression; while on the other hand, the chemist will see in it evidence of the rapid advance of this science. Within two years, three able European chemists, Liebig, Daubeney, and Johnston, have given to the world most mature and valuable treatises upon it; and now we have a cis-atlantic effort, which will not suffer by a comparison with any other. Truly the genius of agriculture may exult in the prospects that are opening before her."

Send a boy for the cows, but see to the milking yourself.

For the Farmers' Cabinet.

Chemistry and Farming.

The first part of "The Book of the Farm," published at Edinburgh, by Henry Stephens, the able editor of the Quarterly Journal of Agriculture, contains some interesting remarks on the *unrealised* calculations that have been made by many, in relation to the advantages which are supposed to have resulted to agriculture, from the researches of scientific men. Without adopting the writer's views throughout, or responding to the discouraging statements which he makes, as to the benefits conferred upon agriculture by the investigations of science, I have been forced to conclude, there was much good sound sense in the quotations which I herewith offer to the Cabinet. The editors will doubtless agree with myself, that the labours of Davy, Liebig, Johnson, and others of this class, are hardly appreciated by Stephens. It appears to me, these men have done much; they have laboured in a field where much was to do, and where much has been well done. But, after all, farming in this country, is a plain matter of fact—practical operation. To the man who, like your correspondent, holds his plough himself, and supports his family by the slow returns from his farm, and whose *means* are concentrated on his farm, it appears to me *vain* to talk about his searching into all the *rationale* of nature's operations on his lands. I have read abundance about *oxygen* and *hydrogen*, and *sulphates* and *carbonates*, and *elaborations*, &c. &c., and I have set it all down as, no doubt, very wise, and to the purpose; but when I closed my book, it was as when I opened it, all *Greek*. I know you will rap my knuckles for this heterodoxy; but *you* need not be responsible for my sentiments—and you may tell me, if you will, that the scientific writers on agriculture are not obliged to spend their strength in investigating and elucidating matters, and then find me brains to understand them. Very good; but to ninety-nine in a hundred in this country, farming is entirely and thoroughly a *practical* operation; and those practical operators cannot possibly comprehend why they should be perpetually *dinged* with the disheartening assurance, that they never will make *farmers* till they know all about the *ologies* and *affinities* of the *laboratory!* They do not believe it. They want to profit by the successful *practice* of others, and improve by their own misdirected experiments: we will look quietly on, therefore, while the learned are disputing whether plants get their living in *this* way, or in *that*—and until the *grave* question is settled, whether the irregular forms of the main root, may not be accurately developed by analytical formula,[*] we shall be content to let them have their own way, and grow as they have done ever since their creation!

But I had almost forgotten the extracts I promised you: they have interested me, as perhaps you will conclude, any other simple thing would an IGNORAMUS.

"Agriculture may, perhaps, truly be considered one of the experimental sciences, as its principles are no doubt demonstrable by the test of experiment, although farmers have not yet been able to deduce principles from practice. It is remarkable, that very few scientific men have as yet been induced to subject agricultural practice to scientific research; and those of them who have devoted a portion of their time to the investigation of its principles, have imparted little or no satisfactory information on the subject. This unfortunate result, may probably have arisen from the circumstance, that agriculture has so intimate a relation to every physical science, that, until all those relations are first investigated, no sufficient data can be offered for a satisfactory scientific explanation of its practice. The difficulty of the investigation is, no doubt, much enhanced, by husbandry being usually pursued as a purely practical art, because the facility of thus pursuing it successfully, renders practical men indifferent to science. They consider it unnecessary to burden their minds with scientific research, whilst practice is sufficient for their purpose. Could the man of practice, however, supply the man of science with a series of accurate observations on the leading operations of the farm, the principles of those operations might be much elucidated; but I conceive the greatest obstacle to the advancement of scientific agriculture, is to be sought in the unacquaintance of men of science with practical agriculture. Would the man of science become acquainted with practice, much greater advancement in scientific agriculture might be expected, than if the practical man were to become a man of science; because, men of science are best capable of conducting scientific research; and, being so qualified, could best understand the relation which their investigations bore to practice; and, until the relation betwixt principles and practice are well understood, scientific researches, though perhaps important in themselves, and interesting in their results, tend to no practical utility in agriculture. In short, until the facts of husbandry be acquired by practice, men of science will in vain endeavour to construct a satisfactory theory of agriculture on the principles of the inductive philosophy.

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[*] We are at a loss to surmise, what the writer in this, rather far-fetched allusion, has reference to; unless it be to a statement, which we have seen in a late Number of the "Cambridge Miscellany." It is there said, that some calculations have been made and presented to the Academy at St. Petersburgh, in relation to the "spiral curves formed by the fresh shoots from the axes of trees and plants." And a "hope is indulged, that by analyzing the laws of these spirals, a mathematical theory of vegetation may be constructed, which can be compared with the species and genera of Botanists."—Ed.

"If this view of the present position of the science of agriculture be correct, it may be expected to remain in a state of quiescence, until men of science become practical agriculturists, or, what would still prolong its state of dormancy, until farmers acquire scientific knowledge. It is a pity to damp the ardour of scientific pursuit where it is found to exist; but, from what I have observed of the scanty services science has hitherto conferred on agriculture, and knowing the almost helpless dependency of farming on the seasons, I am reluctantly impelled to the belief, that it is less in the power of science to benefit agriculture, than the sanguine expectations of many of its true friends would lead farmers to believe. It is wrong to doubt the power of science to assist agriculture materially; and it is possible, in this age of successful art, that an unexpected discovery in science, may yet throw a flood of light on the path of the husbandman; but I am pretty sure, unless the man of science become also the practical husbandman, it will be difficult, if not impossible, for him to discover which department of the complicated art of husbandry is most accessible to the research of science.

"Hitherto, as it appears to me, agriculture has derived little benefit from the sciences, notwithstanding its obvious connection with many of them."

"Chemistry is somehow imagined to be the science that can confer the greatest benefits on agriculture. This opinion seems confirmed in the minds of most writers and agriculturists, and especially the English, most probably from the circumstance of an eminent chemist having been the first to undertake the explanation of agricultural practice on strictly scientific principles. Sir Humphry Davy has, no doubt, been the cause of bestowing on that science a character, whose influence was imagined to be more capable of benefiting agriculture, than its eulogists have since been able to establish. He endeavoured to explain with great acuteness, many of the most familiar phenomena of agriculture, when in possession of very limited acquaintance with practical facts; and the result has been, that whilst his own chemical researches have conferred no practical benefit on agriculture—his conclusions being in collision with practice—the field of observation and experiment which he explored and traversed, has since been carefully avoided by succeeding chemists, in the conviction, no doubt, that wherein he failed, they were not likely to succeed. The idea seemed never to have struck them, that Sir Humphry had attempted to enforce a connection betwixt chemistry and agriculture, which both were incapable of maintaining. Viewing the relation betwixt them merely in a practical point of view, I can see no very obvious connection betwixt tilling the soil, and forcing crops by manure for the support of man and beast,—which is the chief end of agriculture,—and ascertaining the constituent parts of material bodies, organic and inorganic,—which is the principal business of chemistry. A knowledge of the constituent parts of soils, plants, or manures, now forms a necessary branch of general chemical education, but *how* that knowledge *can improve agricultural practice*, has never yet been practically demonstrated. No doubt, chemistry informs us that plants will not vegetate in pure earths, and that those earths constitute the principal basis of all soils; but as pure earths are never found in soils, in their ordinary state, farmers can have no chance of raising crops on them. It may be true, as chemistry intimates, that plants imbibe their food only when in a state of solution; but what avails this fact to agriculture, if fact it be, when manures are only applied in a solid state? It may be quite true, as chemistry declares, that plants cannot supply, from their composition, any substance they have not previously derived from the air, earth, or decomposed organic matter; but of what practical use to agriculture is this declaration, as long as farmers successfully raise every variety of crop from the same manure? Chemistry may be quite correct in its views with regard to all these particulars, but so is practice, and yet both are very far from agreeing; and as long as this constitutes the only sort of information that chemistry affords, it is unimportant to the farmer. He wishes to be shown *how* to render the soil more fertile, manures more effective, and crops more prolific, by the practical application of chemical principles."

An American Aloe, said to flower but once in one hundred years, is now in full bloom at Harden Grange, Yorkshire, the seat of W. B. Ferrand, Esq., M. P.

For the Farmers' Cabinet.

Rust in Wheat.

A friend writes me, "My wheat is terribly affected with the rust, grain as well as straw." Now I would ask, was it ever really known that the grain totally escaped when the straw was affected with rust? I know that many will be ready to say yes, but I am inclined to believe otherwise, and have no doubt, if the grain from rusted straw were closely examined by the microscope, and then weighed against some of the same species, which had ripened with uncoloured straw, it would be found that the disease, which had fallen so early as to cause the bursting of the sap-vessels in the straw, in its passage towards the ear,* must have *an effect* upon the quality of the grain, in proportion, of course, to the virulence of the disease. At all events, I have never examined a single sample of rusted wheat, by comparing it with that produced from an acknowledged clean crop, without detecting an inferiority, either in weight or colour, and often in both, even when the evil was not in the least suspected by casual observers. And it is often that such inferiority shows itself most decidedly in the two or four upper grains of the head, those being most liable to be affected by the premature bursting of the sap-vessels in the straw, as having been situated at the most distantly removed point to which the sap has to ascend, which it is but reasonable to expect. Would your readers, who have, unfortunately, such ample means the present year, of ascertaining the real state of the question, be pleased to make strict inquiry, each for himself, by actual examination and experiment, whether it be not a fact, that when the straw is affected by rust, the grain never *totally* escapes infection. Z.

Composts.—I have tried the earth taken from ditches in the meadows, but never found any benefit from it; but when carried in large quantities into my hog-sty and barnyard in the autumn, and turned up in the spring and used for manuring corn, &c., I have found a load of this earth-mixture as beneficial as a load of unmixed manure from the yard or hog-sty; and after a year's exposure never found unmixed dung better.—*Bronson.*

New Jersey Agricultural Society.

The regular quarterly meeting of this Society was held in Princeton, on the 23d of July.—The President, Caleb Smith Green in the chair.

Mr. Green from the committee appointed to investigate the cause of, and to report the best *preventives* against Rust and Mildew of wheat—read the following report on that important subject, which was ordered to be filed and published.

Report on Rust and Mildew.

Mr. President.—Your committee in their endeavour to investigate the subject of mildew and rust on wheat, and what may be in some measure preventives, will first present to your consideration some circumstances which have occurred under our observation, to show that it is not in the power of us short sighted mortals, with our puny arm, to contend against the over ruling providence of God: occurrences arise which are not in the power of man to foresee, govern, or controul. In confirmation of this view of the subject we present the following cases.

One of our farmers had an extraordinary piece of wheat, which he thought out of danger, it was so near ripe. On a very hot day, between the hours of one and three o'clock, there came a small cloud over, which completely drenched the field of wheat. A death-like stillness succeeded; the cloud passed away; the sun shone intensely hot. The owner in this state of the case, went to examine the wheat, as it was much pressed down by the shower; he immediately observed a continual ticking, or snapping noise in every direction in the wheat. The straw was fine and bright, but upon examination he perceived it bursting in short splits of a fourth of an inch long, and the sap exuding in thousands of places. A day or two after, the whole field was darkened with rust and the wheat of very little value. It does not appear that these circumstances take place while the wheat is growing, but only at this critical state of ripening.

On my neighbour White's farm some years since was one of the heaviest pieces of wheat straw I ever saw, remarkably fine, and nearly ripe. I had also a good piece advancing fast to maturity; on a close warm morning, a small cloud of fog arose from the meadow and gradually covered the two fields, but was not a general fog; being very still, it remained hovering over the fields until the hot sun dissipated the vapour. Being acquainted with the above case, I was alarmed for the wheat and watched over it with deep interest. When the sun had somewhat dried the straw, and warmed it, the straw began to burst with a continual ticking noise, the the sap exuding at all these little splits. In a day or two the fields were black with rust, except some small spots, which are worthy of notice. An acre or two of mine was so near ripe that the wheat was tolerable good, and the rust on this part of a reddish brown. In Mr. White's field there were some trees which kept the intense heat of the sun from the straw: there was tolerable wheat, also. The rest of the fields would scarcely pay for gathering and threshing.

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* At the critical period of wheat being in milk, damp and hot weather forces it too rapidly; the juices rush up the stalk faster than the head can receive, burst the scarf-skin, ooze out and turn brown—the stalk is then said to be struck with the rust, and the consequence is, that the kernel is not filled with inspissated juice, and on drying, is found light and shrivelled.—Hatheway.

A question of importance arises on these two cases. Was this injury a fungus, the very fine seeds of which float about and attach themselves to the straw, as some of our learned Agricultural writers* tell us? or is it the sap of the straw that ran out and was dried up on the straw, and was reddish or black according to its state of ripeness or fulness of sap?

Your committee are decidedly of the opinion, that the sap being lost at this critical time of ripening, is the true cause of the shrinking in the grain.

Some of our most judicious Agricultural writers have taught us, that the leaves of Indian corn above the ear cannot be taken off at the time of ripening, without detriment to the corn, causing it to shrink in the grain.

Your committee made an experiment on this case, when the corn was nearly ripe, stripping some rows, and leaving others, over several acres. At husking time it was evident that on the rows that were stripped, many of the ears were considerably shrunk in the grain, so much so as to be loose on the cob; the ears on the rows that were not stripped, showed none of those shrivelled grains, thus showing in the most satisfactory manner the damage sustained by removing the leaves above the ears.

Your committee think they are fully sustained in their conclusion on the wheat, by the parallel case of injury sustained by the corn in the removal of the leaves, which at this critical time have the only nourishment to sustain the corn in ripening. So of the wheat straw; the bottom is dead in a great degree, but fiom the upper joint to the ear is full of nourishment to sustain the wheat in ripening, and this is the part that suffers the loss of sap. The under part of the straw is ripe, and passed through the state in which it can suffer loss, and we often find it bright and tough at the bottom, when the top will scarcely make a band.

These two cases fully demonstrate the impossibility of any management in the power of man, always to insure a crop of wheat safe against the destructive effects of rust. Yet a kind Providence has left us so many means by which we may reduce this loss, and in some measure approach to this very desirable security, that they are worthy of our attentive consideration, and practical experiment.

Mildew and rust are more common now, than before that destructive scourge, the Hessian fly, appeared in this State. Previous to that time the wheat was sown the last of August, and the first of September, tillered largely, obtained great strength of roots, and was but little injured by winter frosts; the effect of which was to produce strong, bright straw, with but few leaves; the consequence of which was but little mildew and rust.

The fly having totally cut off the wheat, put the farmers on many schemes to meet this ruinous enemy. Among the experiments tried, manuring high just at seed time, and sowing late, was much depended on. But disappointment frequently followed from mildew or rust. As the wheat was often sown late in October it ought to have had three bushels of seed to the acre, instead of three pecks, or one bushel, the usual quantity then sown. Being sown so late, the plants had no time to tiller, or multiply and strengthen their roots and stalks; of course the winter weakened and thinned the plants, which made the wheat still later in the season; and when highly manured the straw was full of leaves, very succulent, usually mildewed, and almost certainly rusted—of course, a crop of small value.

At this difficult time of obtaining a small lot of wheat, one of your committee in a conversation with an Englishman who then was a very successful raiser of wheat on Penn's Manor, fully stated the difficulties as above narrated. He considerately replied, that there appeared to be two prominent errors in the then practice—the manuring so late, and sowing so little seed.

Ques. What injury by late manuring?

Ans. Apt to make the straw very succulent and full of leaves.

Ques. What quantity of seed ought to be sown?

Ans. Increase the quantity till it fully occupies the ground, making the straw fine and but few leaves.

This short history of the difficulties, and means made use of to obtain a small lot of wheat immediately after the fly came, your committee thought might be of use in further examining the subject. It shows the progress we have made at the present time in better cultivation, earlier manuring, carlier sowing, and doubling the quantity of seed sown.

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* See Cultivator and Farmer, Vol. 1st, No. 2, page 36.

First Means—The means of prevention; first a good dry, loamy soil, well prepared by cultivation, not too recently manured, that by cultivation there may be a good assimilation of manure to soil, the more complete the better. Cover the seed about two inches deep, either with drill or plow, that it may have a good hold of the soil, and not be thrown out by winter frosts.

Second Means—Quantity of seed sown must depend on the judgment of the farmer. The strength of the soil, the size of the grains, &c., must be taken into consideration. The grains of some wheat are almost as long again as some others, and some kinds tiller more than others; at any rate let the ground be fully occupied, that no weeds or trash occupy the ground and fill the void spaces between the wheat, or thin places, which will be full of leaves and sap, and of course, rust. Such thin places, by unequal sowing, were observable in some fields this year, by their dingy or rusty appearance; whereas, the rest of the land sown was bright and good.

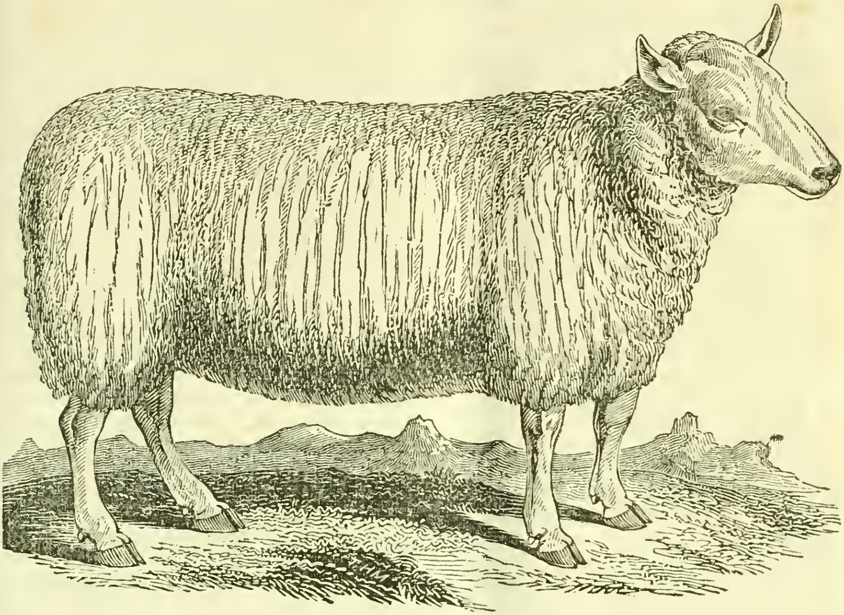
Time of Sowing—As early sown wheat produces the strongest straw and fewest leaves, and not so liable to be laid with wet, nor so apt to be thrown out of the ground by winter frosts, these reasons recommend it as a preventive to rust.

At what particular time wheat ought to be sown, to escape both fly and rust, is not easy to settle, but should the fly cease its depredations. early in September, say from the 18th to the 20th, would be advisable, for the various reasons assigned above. The late sown wheat sometimes succeeds under particular cultivation and soil; still the chances against it are as ten to one.

Kind of Wheat—In a former communication your committee recommended the Mediterranean wheat as most safe. Hitherto the fly has not touched it. It has the same character at the south, as we see by the Farmers' Register,—being untouched there. This is strongly in its favour. It is also less liable to rust than any kind we are acquainted with. But other kinds may offer, and upon trial be found preferable to the Mediterranean. The Goldenrock now upon trial may offer some advantages. It has a strong, short straw, not so liable to get down by wet as some other kinds, and said to be of excellent quality for flouring.

Means of Improvement—We see abroad in the land and around us, among the farmers, a more certain means of improvement than any thing your committee can offer. A spirit of inquiry; a wakeful ambition to meet the difficulties of their profession; a desire to obtain the best seeds, to produce the best quality and greatest quantity of their various products; this my friends, is the surest foundation of all permanent improvement. These hitherto dormant faculties, if kept aroused and active, will produce results in ten years from this time, that will surprise us all, for we are well persuaded that New Jersey is capable of producing four-fold what the land now produces.

Correct Sentiments.—On the intelligence, order and virtue of society—on its industrious habits—enterprise and skill—clearness of vision, and energy of purpose, every one knows, the prosperity of society depends. Mere capital, without labour and science to employ it wisely, or mere physical strength without knowledge to direct it, is useless. Some of the most productive regions of the earth, are inhabited by beggars, the miserable specimens of humanity, who are such mainly, because of their ignorance; whilst wealth is obtained out of the granite hills of New England, and luxury rejoices in the most inclement climates, because living on those hills and under those climates are races of intelligent men. Never, or almost never, then, is there wisdom in practicing economy with reference to the institutions which preserve order, increase knowledge, and promote virtue. These are the fortresses, which in times of danger, ought to be well garrisoned and well stocked with provisions. No matter how much useless display—how much mere luxury, is given up by individuals or communities, but touch not things necessary to the growth of the mind and heart of the people. Take down the streamers, and furl the spars, and throw overboard the cargoes of *silks* and *satins*—to enable the ship to ride out the storm: but do not cut away the masts or unship the rudder. A man short of funds had better eat meat only three times a week, than sell his library, or take his children away from school. So a community had better leave as the last thing to be touched by retrenchment, the means of education, and the institutions of religion. For if these are crippled, bad is only worse; the main springs of social life are broken. Millions of dollars may be saved, in this country,—by giving up what is needless, or hurtful, before there will be any occasion to economise in making provision for the diffusion of knowledge, or the preservation of good morals. The land can do without coaches for a time, and rise again to its former prosperity. Pull down the schoolhouses and burn the wheelbarrows, and this land will remain desolate indeed.—*Newb't Her'd.*



THE CHEVIOT SHEEP;

Ewe, bred by Mr. Thomson, Attonburn, Roxborough co. From "Low's Illustrations."

The Cheviot breed of sheep is derived from a district forming the mountains, termed Cheviot in Scotland. They are composed of a range of beautiful mountains, tending to the conical, and mostly covered with grasses, ferns, wild thyme, and other plants descriptive of *trap*, often to the very summit; frequently in contact at their bases, or separated from one another by narrow valleys. Their highest summit is 2658 feet above the level of the sea, and they are frequently capped with snow, long after it has disappeared from the lower grounds. This district has produced from time immemorial, a race of sheep entirely distinct in character from the breeds of the elevated moors adjoining; they are destitute of horns, thin faces, and legs white; their bodies are very closely covered with short wool, which is sufficiently fine for making cloths. The two-shear wethers when fat, will weigh, on a medium, from 16 to 18 pounds per quarter; the ewes weighing from 12 to 14. The mutton is very good, although somewhat inferior in delicacy to that of the Southdown and Welsh sheep. The improved Cheviots, are of excellent form; of quiet habits; exceedingly hardy, their close fleeces enabling them to resist the extremes of cold. They have spread from their native mountains to a very large extent of country, supplanting in their way the heath breed which previously exisited, and are reared in increasing numbers; having the property of adapting themselves to every country where they are naturalized; and the extension that has taken place of this hardy breed must be regarded as having been of singular benefit to the countries to which they have been carried—to the west of England, and to Wales; and have every where been found admirably suited to a cold and mountainous country; at the same time they are excellent stock for lower and richer pastures, where they grow to a much larger size, and are bred shorter in the leg, and of fine proportions. The wool weighs about 3½ pounds per fleece, its quality varying with the pastures, being fine, where the shorter grasses prevail. The number of sheep assigned to the care of one shepherd in these mountainous districts, is from four to five hundred, if the flock consists wholly of ewes; which number is as much as one man can conveniently manage; but when the flock is composed of part wethers, one man may tend seven or eight hundred. The breed of dogs used on the mountains of Cheviot, are small and of homely exterior, but proverbial for sagacity, fidelity, and untiring perseverance; they perfectly understand the language of their master, and even seem to divine his meaning. Their whole habits are fashioned to the life they lead, for when taken from their natural pursuits their spirits droop, and they lose the sagacity which distinguishes them in the occupations of the shepherd's life.

For the Farmers' Cabinet.

Wheat Sowing.

Messrs. Editors,—The pleasant season of wheat-sowing has again arrived; and again, for the third time, do I call the attention of my brother farmers, to that most-of-all-important of their occupations. It is the easiest thing in the world to "prophesy of the past;" and there are none amongst us who cannot see, after the event has transpired, how the evil might have been avoided, had we but known the circumstances attending the failure. It is, therefore, the part of true wisdom, to endeavour by reason and reflection, so to steer our course, as to be prepared for whatever untoward circumstances may be in store for us, and of which we are at present totally ignorant, and await the event with resignation. To this end then, it still appears to me, that we ought to endeavour to raise our wheat-crops strong and healthy, that they might be the better able to withstand the vicissitudes of climate, to which, for nearly a whole year they are sure to be exposed; and I know of no mode so likely to prove successful, as that pointed out, in an article on this subject at page 19 of the 5th vol. of the Cabinet, and to which, with the reflections appended, I beg to call the attention of your readers. It is there said,

"The most favourable soil and climate for the growth of wheat, is that which is cool and rather heavy. It requires careful culture and a strong and rich seed-bed; but in this climate especially, it ought never to be sown on a pulverized fallow; for although, on some of the cold clays of parts of England, immense crops are obtained by these means, nothing would be more improper in this country, where the object ought to be to render the soil as firm and compact as possible, and to retard the growth of the crop in the autumn, to give it time to tiller and gain strength before the frosts of winter—all which might be accomplished by adopting the new course of the grain-growing districts in Europe, which would be peculiarly well suited to this country and climate; it is as follows: The dung of the winter-feeding establishment is occasionally removed during that season, to a situation, generally to the field where it will be required, where it can be turned up and heaped, not more than three or four feet in thickness, to facilitate its fermentation, preparatory to its being spread as a top-dressing, very early in the spring, on the young clovers; which is soon grown over, and produces a three-fold quantity of hay for next winter's food. Two crops of hay are taken,* and then the lay is turned down by a deep and narrow furrow, the land being thrown into ridges or beds, in width proportioned to the wet or dry state of the soil; and upon this *one ploughing* the wheat is sown early, and harrowed in. In this mode of operation, there is still a sufficient quantity of manure contained in the soil to bring the wheat-crop to full maturity; for the clover has not exhausted more than the grosser particles of the dung, which would have been detrimental to the wheat-crop, rendering it too large, flashy and tender in its autumnal growth, and fitting it for the reception of the fly and other diseases incident to a state of blight, to which it would be particularly liable, especially if attacked by frost before it had been protected by a covering of snow; as also, inducing a redundant growth of straw the next summer, which is equally obnoxious to the yield of grain.

"Wheat thus cultivated, will lie close to the ground during autumn and winter; and will tiller and thicken, instead of exhausting itself in useless and premature growth of, perhaps, a foot in height. Its leaves of dark green will curl on the ground, and be able to resist the frosts, and not be liable to be injured by a depth of snow, never so great in thickness, or of so long continuance; coming out from under it, small in appearance, but not lifted at the roots; ready and willing to start with the first mild weather in the spring, but not gross and tender, so as to feel the effects of a degree of cold and change of climate, which would be found sufficient to prostrate thousands of acres of crops, hitherto the admiration of the whole country. The straw of such crops will have strength sufficient to support the head, which will be larger and longer than that raised from fallow, dung and lime; which always go to produce large quantities of straw, rather than grain. Wheat, when sown very early on dunged fallows, makes too much progress before winter—not so, however, when sown early on lay-land that had been manured on the spring clover, and turned over by a single furrow: the sowing on such land may take place very early, without fear of the crop becoming, what is called, *winter-proud*, or being affected by the root-rot in the spring; which disease is occasioned by being lifted by the frosts and thaws. But how any one should expect to raise good and clean crops of wheat after oats, the land fallowed, dunged and limed, is assuredly the most astonishing thing in the world! That it is sometimes done, speaks volumes in favour of a country which, with such crying treatment, will still work such wonders."

Bordley, one of the most intelligent agriculturists the world ever saw, and an extensive cultivator of the soil in this country, says, "The language of English farmers is, wheat on clover-lay should be sown after one ploughing;" and to conform to this doctrine, I conducted this business on fifteen acres in this manner. The clover having been once cut for hay, and then pastured lightly, the lay was turned in deep, and the furrows laid close and compact. The wheat was sown broad-cast, and twice harrowed in the direction the land was ploughed, and then the land was rolled. The crop stood well and yielded satisfactorily. The operations of ploughing, harrowing, sowing and rolling, followed each other immediately without any pause; but Mr. Macro's experience is against this immediate sowing upon ploughing in the clover-lay, and his experiments were often repeated; while mine was a single instance, which, although it proved highly satisfactory in general, was without any pointed particulars relating to a much greater produce.—Mr. Macro gives the following encouraging detail of his practice and success. "From upwards of twenty years of experience, I am of opinion, that the best way of sowing clover lands with wheat, is, to plough the land ten or twelve days before you sow it, that it may have time to dry; and after that rain has fallen sufficient to cause the land to dress well, lay on the seed in September, two bushels per acre. I am at a loss to account for the wheat thriving better on lands that have been ploughed for some time before the seed is sown, than on fresh ploughed lands, which work better, and constitute a better bed for the reception of the grain, but I have often tried both ways on the same lands, and have always found the former answer the best." And Kliyogg, the Swiss farmer, says, that wheat shoots strongest when there is an interval between the time of ploughing and sowing.

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* Second-crop clover never causes "slabbering" in horses or cattle in England.

Mr. Singleton of Talbot, a person entirely to be depended upon, says, while walking in his wheat-field, he was surprised to find that the crop was much superior on the worst part of the field, where the soil was the poorest and the thinnest, it being taller, with stronger straw and larger ears. This part of the field had been in clover, which was twice mown, and in August it was broken up and sown with wheat on the first day of September; while the other part of the field, the best land, had the clover broken up in March for the purpose of sowing tobacco: but this crop being laid aside, the land was repeatedly ploughed during the summer as a fallow, and sown also on the first day of September with wheat; the yield from which was only fourteen bushels and a half per acre; when the part which had been twice mown, and but once ploughed, gave twenty-four bushels and a half per acre! This difference is great indeed, if we *add* the value of the two crops of clover, and *deduct* the expense of the summer ploughings, and abundantly prove the superiority of wheat sown on one earth. He adds, "I have found it quite safe to sow wheat during a drought on clover-lay once ploughed, and when the soil is very dry; but not when a light rain has fallen on very dry land: in the former case, the seed is safe until rain falls, which is usually plenty after a drought, for then the seed comes quickly up; but in the other case, it is only slightly damped, and swells; but the moisture is so soon evaporated, as to leave the seed to malt and perish."

My own individual experience, is all in favour of wheat on clover-lay after once ploughing; if the land has been manured the preceding spring as a top-dressing to the young clover, so much the better; indeed, I consider this mode of management, the *beau ideal* of good farming—but I by no means make this a *sine qua non* in my creed, for the best wheat is often grown on land by no means the richest; perfect cultivation being of far more importance. I have always found, too, that the season of wheat-sowing can be very much extended with perfect impunity on lay-land once ploughed; having myself sown so early as the first days of September, and so late as November, the same year, with the same success; but such liberty could not be taken with fallow-land, as I know to my cost. The practice is, to begin sowing early on lay-land; and when a portion of this is sown, to commence on the fallow; and after they are all sown, to turn about and finish with the lay-land, by which the seed season on a large farm, can be prolonged to an almost indefinite extent. I have often known excellent lay-crops of wheat, from even a December sowing—a circumstance of great importance on farms of large extent.

But I perceive that many of my neighbours are turning down their second crop of clover, with the view to run the land back, and sow wheat on the half-decomposed clover; while others contemplate a third ploughing, by turning back again the clover-sod. Now, all this appears just in opposition to the desire to obtain "a close and compact seed-bed for the wheat," and is a partial fallowing process, which in this climate cannot, one would suppose, be the best adapted to secure a strength and vigour in the plant, which every one has seen to arise from a sowing on clover-lay; besides incurring unnecessary labour and expense, without the slightest ground for the expectation of a correspondent advantage—this I do not understand, and am therefore preparing to turn-in a second crop of clover, with one of Prouty's Sod ploughs, with a deep and small furrow, the sub-soil plough following in the furrow immediately after; and upon this one plowing I intend to sow wheat early, and roll it in. It is also my intention, to give an account of my prospects from time to time, for publication in the pages of the Cabinet; for the success of which very valuable work, and ample remuneration for your untiring labours in the good cause, you have my best wishes and heartfelt thanks.

Vir.

August 23d, 1842.

For the Farmers' Cabinet.

Disease of the Plum.

The last Number of the Farmers' Cabinet, contains a description by Dr. Harris of Massachusetts, of what he terms *a new disease of the plum.* The disease is not new in the vicinity of Philadelphia; although, as Dr. Harris remarks of it in Cambridge, it has been here confined to certain trees—those of the native red plum. On these I have observed the disease from my early childhood, twenty-five years ago; and as I have never seen during that period, other kinds similarly affected, it may be hoped they will escape the disease.

If it be really new in Massachusetts, it is somewhat remarkable; because, as a general rule, the ravages of insects and diseases injurious to vegetation, commence in the east and gradually progress westward.

S. Rhoads, jr.

Haddington-Nursery, Eighth mo. 29, 1842.

Punctuality.—Method is the very hinge of business; and there is no method without punctuality. Punctuality is important, because it subserves the peace and good temper of a family; the want of it not only infringes on necessary duty, but it sometimes excludes this duty. The calmness of mind which it produces, is another advantage of punctuality; a disorderly man is always in a hurry; he has no time to speak to you, because he is going elsewhere, and when he gets there, he is too late for his business;—or he must hurry away to another before he can finish it. Punctuality gives weight to character. "Such a man has made an appointment. Then I know he will keep it." And this generates punctuality in you; for, like other virtues, it propagates itself. Servants and children must be punctual where their leader is so. Appointments, indeed, become debts. I owe you punctuality, if I have made an appointment with you; and have no right to throw away your time, if I do my own.—*Selected.*

Use of Muck.

Editors of the Cultivator.—As I promised a short time since, to give you some account of my experience in muck, I now proceed to state, that in the winter of '39–'40, I drew from a large mill pond on the Kayadarosseras, 1,000 loads, and put on a poor worn out field of 17 acres; soil, sand and gravelly-loam; planted to corn the following spring; product, 50 bushels to the acre. This field had gone through the genuine skinning process previous to coming into my hands, and grew nothing but sorrel and mullein. The extra product I counted at over 20 bushels per acre. In the fall of '40, I drew from what had been a black ash swail or narrow strip of swamp, 300 loads, and put on 4 acres of almost barren sand; planted to corn in '41, and though the drought was severe, yet the produce was at least 50 bushels per acre. In the winter of '40–'41, I drew from the pond aforesaid, about 700 loads, and applied to two other fields; planted to corn the following spring, produce equal to anything in the neighbourhood. I drew last fall and winter, from the ash swail, about 500 loads and put on 8 acres; now planted with corn, and looks first rate. After corn, I have sown oats and seeded down; the seed which before was invariably lost for want of nourishment, has, since the muck application, taken in the most perfect manner. The fields are all renovated, and I consider the experiment a complete triumph, to the great discomfiture of certain wiseacres, who prophesied on my commencement, a failure. I have the happiness to state that several of my neighbours, who "seeing, believed," have adopted the practice, and as uniformly successful, when applied to light worn out soils, for which it is, in my estimation, pre-eminent. For heavy loams, or clay, an admixture of lime or yard manure, would be indispensable. The muck of my mill pond is making new accessions at each freshet, and where I first began removing it, there has nearly as much more accumulated. I intend making large and continued drafts on these "banks of deposite," finding thus far, the dividends fat, and repudiation and protest unknown in the matter.

Respectfully yours, Seth Whalen.

Whalen's Store, Saratoga co. N. Y., June 7, 1842.

Dangers from Chimneys on fire,—may, it is said, be expeditiously obviated, by throwing a pitcher full of water on the fire. This will of course generate a quantity of steam. If a sheet be then fastened up in front of the fire place, so as to prevent a current of air from ascending the chimney, the fire will soon go out.

Farming on a Large Scale.

What large tracts of land are sometimes tilled in the Western States under the name of farms, may be judged from the following article which is found in the Peoria Press:

An Illinois Prairie Farm.—Mr. Isaac Underhill, of Peoria, has a farm about 18 miles above this place, at Rome, on the Illinois river, which is the largest, or at least one of the largest in the State.

The first field of this farm that meets your view in approaching Rome, consists of five hundred acres, under what is sometimes called Virginia or worm fence, eight rails high. Three hundred acres of this are in wheat, principally put in last fall, and which was sowed upon the sod, last year for the first time broken up by the plough. From such ground a full crop is never expected, before the large furrows, which had lain in a solid body of matted roots for ages, are thoroughly decomposed and pulverized, which cannot take place in a few months. The wheat is now (July 9th,) "white for harvest;" and it is estimated that parts of the field will yield twenty-five, and some thirty bushels to the acre, though the whole may not average much over twenty bushels. The difference in the crop is mainly attributable to the time and manner in which the ploughing and sowing were done. The balance of the field is in corn and oats.

The second field, which is nearest Rome, and separated from the first named, by the road leading from Northampton to that place, consists of two hundred acres, which is enclosed with a beautiful and excellent board fence. This was done at an expense of $1265, which was about the cost of the fence around the five hundred acres. This field contains wheat, rye, oats, and corn, and shows what the La Salle prairie can do when under full subjection to the hand of the cultivator. The wheat here presents a scene beautiful beyond description. It overtops the fence, which exceeds five feet in height; it is clean, well headed and even, and must produce thirty-five bushels to the acre. A description of the rye and oats, would be such as might excite doubts of its truth in the minds of those who have never seen the crops of our prairie state. The corn, though fine, is not so well grown as it is at the same time of the year in ordinary seasons.

The third field, which lies north of the second, will be of mammoth size when completed, which will be in a very short time. Much of it is now under fence, broken up, and a part of it in corn. It will consist of sixteen hundred acres, all under one fence.

The whole farm comprises about two thousand three hundred acres, and has a straight line of fence on one side, three miles long.

Mr U., expects this fall to be able to put seven or eight hundred acres in wheat. Much of this will be in ground a second year under cultivation, and with an ordinary season the next year's crop of this and the sod wheat, or what will be put in new ground, may reasonably be calculated to yield at least, an average production of twenty-five bushels per acre.

The breaking or ploughing of the prairie, cost Underhill $2,50 per acre by contract, and wheat sold here nearly all last winter at 75 cents per bushel. We add these prices to the preceding account, that the reader may form some idea, of what can be done in the way of prairie farming in Illinois.

Mr. U. is now building two large barns, 30 by 50 feet, on the bank of the river, at Rome, where there is one of the best steamboat landings on the river. The first of these was raised last Saturday, and the frame of the other will be ready to go up in a short time.

For the Farmers' Cabinet.

Instruction to Young Farmers.

While your valuable paper enables the experienced and long established agriculturist, to graft upon his *modus operandi*, the improved instruments, and practice, and stock of modern times—and others from year to year, to make advances towards perfecting their system, there remains a class of persons, who will unite with me in desiring, from one so competent to give it, a series of essays, which do not take for granted, so much previous experience and knowledge.

In our early years, we knew something of the manner in which our fathers had followed in the steps of *their* parents, in their farming operations; but we left those peaceful homes, and have for years been engaged in other pursuits, with various success. Now at length, we are disposed to return to our hereditary occupations. And with these feelings, as we take up your paper, we are at a glance constrained to pause, and say, Surely this is not the way in which our fathers farmed!

That we may avoid the loss and disappointment of purchasing experience, at a rate so high as this view of the matter causes us to fear; and especially, feeling that we have no remaining years to waste, we beg of you to favour us with the papers at which we aim.

We remember that much used to depend upon local circumstances and other contingencies, and shall not therefore, expect your essays to be entirely free from these disadvantages. But you may suppose certain preliminaries, and you may make more than one or two, or three hypotheses. Then tell us what particular attendant circumstances of soil, &c., should determine our selection of a Farm—of how many acres it should consist,—what tools should be procured,—at what season we should commence,—and in regular order, how we should proceed. Thus we shall have a basis upon which to place all the excellent things which your paper contains; and thus many, who have now lost the run of "matters," will know just where things stand. I am aware that all this may appear very simple, to those whose passing years have not failed to accumulate wisdom and knowledge; but I am also certain, that such good men will rejoice that we, who are now coming among them, should come under such especial advantages.

A Subscriber.

Philad., Aug. 17, 1842.

We publish the above letter entire; not because we are able, very thoroughly to comply with the wishes of its writer, but to give expression to feelings, which we think it likely, are common to many others who are looking forward to the time, when they may lay aside the occupations of a city life, and take hold of the plough and the scythe, on a farm of their own.

To a person who is entirely ignorant of farming operations, or who has for so many years been unconnected with them, as to have lost the "run of matters," it appears to us, that books can hardly give the information in detail, that is inquired for. The size of the farm, for instance, should depend upon the capital to be invested, and the tact of the occupant to manage a large or a small concern. The kind of soil and location, would be regulated by the purposes to which it is to be made subservient. Shall it be a grazing, or dairy farm—a meadow, or upland farm—for pasturage only, or for tillage only—or for both combined? Shall it be particularly adapted to sheep husbandry—or shall it be for the growing of perishable articles, suited to the daily wants of our city market? Upon the decision of these questions, and considerations connected with them, would depend the size of the farm, the soil and the location. Every man too, would have his predilections in relation to *neighbourhood*, as well as to the general aspect of the country. Would a mountainous, rolling, or flat country be sought? Would the vicinity of our commercial cities on the seaboard, be preferred, —or the interior of the Atlantic States? Or would the boundless variety of situation and of soil, be examined, over the great valley of the Mississippi? These, and many other analogous questions would be asked, by a person who might be requested to advise another, about to leave the city, for the purpose of cultivating his own land. From the granite rocks of New England to the palm and orange groves of Florida—from the marl regions of New Jersey to the cane-brakes of Louisiana, Providence has spread before our enterprising citizens, every variety of climate and of soil—every variety of production, and almost every difference in the facilities with which a market may be reached. Some will give the preference to one situation, and some to another;—none, however, will complain, that there is not the most ample room for the broadest enterprise.

But, supposing our unknown friend would locate himself in our own vicinity, in the midst of his own people;—he would, if ignorant of soils, of course, advise with competent persons, previously to purchasing, and they would be governed in the advice given, by the main object which the purchaser had in view. If he depended mainly upon books for the details of his operations, he must unquestionably fail in his experiment. They generalize, and give the broad principles of agriculture, and many times also important details; but the minutiæ—the every day operations—depending upon the ten thousand varieties of circumstance, must be gathered from close observation and experience. When your neighbour plants his corn, or sows his wheat, or harvests his turnips, it is a fair inference that it is seasonable for you to do the same. This closeness of observation we have spoken of, rendered doubly valuable by his acquaintance with works of merit on agriculture, will soon enable our beginner to improve upon his own mistakes, and bring the unchanged routine of his neighbour to the test of a well informed judgment; and thus having for a while closely watched the operations of the judicious around him, and been regulated in his own movements by theirs, stepping only as they stepped, he will be able to reciprocate the favour, by showing an *improved* practice.

As respects tools, we may say of them as of other things—*good* tools, *good* stock—and if the land is not already *good*, make it so. But how it shall be made good, is quite another thing. We could give no directions on this point, without knowing where it is, and what it is, and what it is mainly intended for.—Ed.

For the Farmers' Cabinet.

The Cattle Compost-Yard.

Messrs. Editors.—I was much interested with the article at page 362 of the Cabinet for July last, on the subject of "Compost-yards," as distinct from the stable or cattle yard of the farm; and can readily believe, that such an establishment is more likely to prove a mine of wealth to the possessor, than the *new* gold mines in the South, of which we again hear so much. And I was prepared to ask, if any one could point out a difficulty or objection to the mode there recommended! In your last number, under the head of "running Commentaries on the July number," a correspondent observes, "The great obstacle to the formation of compost heaps in this country, is the scarcity and dearness of labour;" and yet he goes on to say, "Some gentlemen in Talbot county, Maryland, amongst those who compose a society for agricultural *converzationes*, contrive to collect and haul out 3,000 loads a year," and this they, no doubt, do to *profit*, or it would not be done at all by those who of all others are the most ikely to have, at these *converzationes*, taken *the time*, *the how*, *the when*, *and the wherewith*, as well as the *cost and value of he labour*, into account. There is no question, that the business will be attended with abour and expense, especially the bringing muck, &c., from a distance, "merely to carry it back again," besides the trouble of mixing and turning over, as prescribed; but I fear that all this must be incurred and submitted to, before the advantages arising from he system can be realized. So, it may be well to consult the cost before entering upon he undertaking, for every practical man knows that there is no "royal road" in the pursuits of agriculture, as there, every one must *earn* his bread before he eats it.

It is on this interesting subject that I am empted to give some account of a late visit which I made, partly induced by the menion of your own excursion to the farm of Mr. Benjamin Webb, near Wilmington, and mainly with the same view, to examine his crop of corn for sugar making the preent season, of which, however, your own description renders further notice from me, unnecessary. But while there, many things truck me as well deserving notice, and especially the mode pursued in the preservation of the dung and urine of the cattle yard; and which I will endeavour to decribe, for my own edification at least. The ow stables consist of two ranges of stalls, etween which is a yard entirely roofed over, for the reception of the dung of both; the talls being cleansed by throwing the dung ut of the windows made in the sides of the wall, and *not out at the door;* by which he entrances are kept clean and neat. At he end of each range of cow stalls, a cisern is sunk into the ground to receive the urine or drainage; and when these are full, he liquid matter is dipped out and thrown ver the dung in the covered yard. A very imple process, and attended with little laour or trouble, but by which the manure eap is increased in quantity, and in quality, hree fold. The cows stand on a wide and ubstantial board floor or platform, which exends back several feet behind them, leaving a very wide space for passage. It is Mr. Webb's intention to take up this floor, and form a water-tight cistern under its whole ength and breadth, and of considerable epth; and in this receptacle to deposit muck, ich virgin earth, weeds, &c., &c., so as neary to fill it; then to replace the floor, perforated with holes, through which the liquid porions of the manure might descend and saurate the earth, &c., and which when thoroughly impregnated, will be thrown out on the dung in the covered yard, and in the end be thoroughly turned up and mixed with it; and then will the cistern be ready to be again replenished with muck, &c., for further operations. Now, we are often told to make our hogs work, but here a dairy of about thirty cows are made to do the thing most effectually, and neatly at the same time. This appears a mode of saving a considerable portion of the labour of the "compost yard," in the periodical turning and mixing of the ingredients, and for which, I, for one, feel grateful, as it is my intention to avail myself of its conveniences; considering it of great importance to the practical man.

I shall not forget the many other lessons of sound wisdom which I treasured up during my short stay with this intelligent friend and excellent agriculturist; on subjects multifarious, yet tending to the perfection of a system of husbandry which must have cost him many years of experiment, built on the soundest principles of theory. In the all-important subject of "cultivating no more land than you are able to do effectually," he observed, that he once owned a large farm immediately adjoining that which he now occupies, which he sold, and purchased about 100 acres of impoverished land, expending upon it in manure and necessary alterations, a considerable portion of the sum received. One of the fields, about ten acres, was so poor, that his friends advised him not to attempt to improve it, as it would never pay the expense; but having put upon it, the first year, purchased manure to the amount of $50 per acre, this field at the gathering of the third year's crop, had paid the whole cost of the manure and the purchase money! The crops are now extremely fine, but he is convinced that he has by no means reached yet, the point at which a further outlay for manure will not richly repay the expense; declaring that he is prepared to expend another 500 dollars in an article which will, at all times pay 50 per cent. profit; while land itself is never worth more than the purchase money. In the true spirit of our motto, therefore, he believes that "the productions of the earth will always be in proportion to the culture bestowed upon it."

Mr. Webb has erected a few pannels of fence after a new plan, which it is expected will prove a saving to the country of many millions of dollars. The posts do not enter the ground, but are made to rest each on a flat stone, and are fixed there by plugs of iron half an inch square, one on each side, let into the stone and fastened there with lead, the upper part forming a bent point, which is driven firmly into the post. If I understand aright, the first cost of the erection of a fence after this manner, will be little, if any thing more expensive than the common mode—that part of the length of the post which enters the earth being saved; while the durability will be increased, perhaps four fold. Would Mr. Webb be pleased to give a description of his new and valuable improvement, with the amount of its comparative cost of erection, for insertion in the pages of the Cabinet? It is likewise his intention to form Poudrette for his own use; ingeniously contriving that his lime-kiln shall do the business of drying the material, by placing it in contact with the outer wall of the kiln. A communication on this subject would be also very acceptable to your readers, and we therefore, respectfully ask of Mr. Webb *not to hide his light under a bushel*,—your subscriber,

John Johnson.

Chester co., August 24, 1842.

The following, cut from a Prince George's paper, on the comparative value and economy of the *horse* and the *mule*, has been kindly forwarded to us, for the Cabinet, by the writer, J. S. Skinner.

Review of the Premiums

Offered by the Agricultural Society of Prince George's county, M'd. For the best Jack $5—For the best Jenny $5—For the best pair of mules $5.

The prejudice against the mule, seems to be as inveterate as that which impels the heel of every son of Adam to "bruise the serpent's head;" whether it be the head of the innocent water, or the harmless black snake, or the viper or copper head, bloated with poison.

Instead of this invidious distinction by the Committee, in favour of the horse, offering the highest premiums for that very expensive animal, in all his ages, forms and sexes, young and old, quick and slow, male and female, it were better, we should think, to have held up the highest premium to him whose *mule power* should bear the greatest, and *horse power* the least proportion, the one to the other, in use on his plantation! As for rewarding the mere exhibition of the "best pair of mules," what length of merit can be discerned in that, unless it be that it implies length of purse to give the highest price! If driven to the ground in the owner's own carriage, in lieu of a pair of $500 Vermont horses, that would be quite a different matter. The mode of taking the last census was very defective in many respects. For example, it only gives us the number of horses and mules in the aggregate; while here, at once, is an agricultural problem, which requires for its investigation, that we should have accurately and separately stated the number of each.

Twenty years ago it was estimated, that the horses in England consumed the product of twenty millions of highly cultivated acres; and Sir John Sinclair calculated the keep of one horse to be equal to the product of five acres. Let us suppose constant work to be provided, as it should be, for every horse that is kept on a plantation; does not true economy as well as humanity and justice demand, that each horse so worked should be well fed? And if so, may not each horse be estimated to consume, at 2½ gallons a day, $56 of corn. Add to this $14 for other provender and shoeing and physicking; and you have an outlay of not less than $70 a year for every work horse, to say nothing of idle brood mares, colts, carriage horses, and other *non-producers;* a sum for each horse equal to the purchase of a first-rate mule, while the average life of the former will not more than half equal that of the latter.

Among planters in the South, whose position and circumstances are so identical with those of Maryland, the economy and advantages of the mule, over the horse, are universally admitted. The report of an Agricultural Society of South Carolina, in relation to this subject, may here be quoted where it asserts: "The mule is more easily raised than the horse, more able to bear heavy burdens, equally strong for the draft, more patient, equally docile, will live twice or thrice as long, capable of enduring much more labour, will do as much work in the same time, and will not be more than one half the expense, as they will not eat more than one half the grain, will make use of long forage, which the delicacy of the horse will reject, and will bear the heat full as well, perhaps better."

Should not these considerations induce planters to ponder and reflect how far it is expedient to aggravate, by their highest honours and rewards, that natural and costly predilection of our countrymen for horses, which may be said already to amount to a passion—one which had its origin in deeds and days long past of

Christian service and true chivalry;

but no more congenial with this utilitarian, money-saving age of ours, than would be the vagaries of the Knight of la Mancha himself.

The last census gives for Prince George's county, Md., 4,648 horses and mules. This we believe to be much short of the real number. The aggregate of both for the state is returned at 92,220.

It is not extravagant to assume that 60,000 horses in Maryland might be well superseded y mules, and taking only ten dollars as the lear saving for each, here would be a re-uction of annual expenditure—in other vords, an increase of income amounting to 00,000 dollars, equal to the interest on the State debt.

In all steady continued draft, as in thresh-ng, grinding, and other machinery, now so nuch in vogue, the excellence of the mule s most remarkable, and especially in his ess liability to gall—an evil to which the orse is peculiarly subject, where his loco-notion in harness is *circular.* On their alue in service that consists of constant, teady hauling, an extract may here be nade from some editorial remarks in an old olume of the American Farmer, then con-lucted by Mr. Skinner, now of Washington. Speaking on the decided preference given y the late General Ridgely, of Hampton, o mules in the heavy hauling connected vith his iron works, it is observed: "For ome time the general indulged an old ser-ant in keeping a single team of horses, ut it was found that the mule teams per-ormed their day's journey, hauling equal veight, sooner than the horses by one hour; nd the greater value of the mules has been o well established, in the course of his am-le experience, that they have superseded orses, with entire conviction of the great aving accomplished by the change. This nformation first derived from his manager, Mr. Green, was fully confirmed by the Gen-ral himself."

Why then, let it be repeated, in reference o these two animals, make fish of one and lesh of the other? Offering $76 in premi-ms for the horse and $15 only for "Jack, Jenny and mules;" and that too under the uthority and sanction of gentlemen, who cannot be too much admired for their public spirit and honourable intentions; nor too closely imitated in their individual practice nd general management.

As to the more general use of the mule in light harness for the road, the common impression is, that he can't be made to *travel fast enough.* Nobody likes rapid motion more than the writer of these crude but well meant and respectful strictures; and he would take leave to inquire, who has given to this neglected hybrid, a patient and fair trial, to see how much his speed may be improved? Let it be considered how long it takes to bring a crack trotter, such as Ripton or Confidence to his best! Hiram Woodruff, or Bill Wheeling, the American Chifneys, among trotting jockies, never think of taking a horse in hand, to train him for this pace, until after he reaches his sixth or seventh year; and they can hardly be said to get to their best work until they fall into their teens. Old Top Gallant performed his *chef d'œuvres* after he was twenty! When the mule has been in like manner taken up, and systematically trained for the trot, and it is found that he cannot be driven at the rate of eight miles an hour, it will be time enough to pronounce him impracticable in that pace; but the writer knows him to be master of that rate, for he has ridden with two others besides General James Shelby, who drives nothing else in his private carriage, from Lexington out to his magnificent blue grass farm, eight miles, behind two mules of about 15 hands, within the hour, and without a touch of the whip; and learned from the General that he had driven a pair to the Blue-lick, a distance of forty miles, in six hours, stopping one hour on the way.

In lieu then of some of the premiums bestowed on breeding stock to give animals of slow draft, and on sucking colts, would it not be more politic to lend the countenance of the society to the rearing and more general adoption for the roads as well as for the field, of a more economical and enduring animal power? Might not a premium be well offered in the shape of a set of knitting needles in a silver case, or a butter cooler of ground glass, with a cow reposing on its silver lid, to the wife of the planter who shall accompany him to the cattle show, in a plain light carriage drawn by a pair of best broke mules? To the wife, because it is doubtful whether, without her consent, this great desideratum in rural economy ever can, or perhaps, we should add, ever ought to be achieved! Were it to be imagined that the fact would have any weight with our republican house wives, it might be added, that the medals struck in honour of Agrippina, a heroine whose life was adorned with the most noble virtues, bear on them the image of a mule; and a gentleman at my elbow reminds me, that he has seen Charles the X. setting out for his royal palace at Fountainbleau, 13 leagues from Paris, driving six splendid black Spanish mules of Andalusian blood! But it would be a libel, of which I should never be guilty, to suppose that an American matron could be influenced by any motive, so strong as her ambition to promote the independence of her husband; and to set to her friends and neighbours an example of economy and good sense.

Improved Corn Bread.—Take corn meal, a sufficient quantity to make a stiff batter, with three pints of sour milk; three eggs well beaten; two oz. shortening; one gill beet molasses; a little salt and saleratus; grease a pan well, and bake quick.

Agricultural Exhibition.

Premiums offered by the Agricultural Society of New Castle county, for the fall exhibition and cattle show, to be held on Wednesday and Thursday, September 14th and 15th, 1842; near the city of Wilmington.

HORSES.

For the best thorough bred stud horse, ...silver medal,—$5
For the second best thorough bred stud horse, Farmer's Land Measurer and certificate of merit.
For the best stud horse for field and road, ...silver medal,—5
For the second-best stud horse for field and road, Liebig's Chemistry and certificate of merit.
For the best thorough bred mare,......silver medal,—4
For the best mare for field and road, do. do.
For the best horse colt, from 2 to 3 years old, ...Turf Register, 1 year.
For the best horse colt, from 1 to 2 years old, ...Lawrence on Horses.
For the best mare colt, from 2 to 3 years old, ...Farmers' Cabinet, 2 years.
For the best mare colt, from 1 to 2 years old, ...Cultivator, 2 years.
For the best colt under 1 year old, ...Work on Farriery.

Committee on horses.—John Richardson, Richard Jackson, J. J. Brindley, James Webb, James T. Bird and J. W. Andrews.

NEAT CATTLE.

For the best native bull, ... silver medal,—$5
For the second-best native bull, ... Farmers' Land Measurer and certificate of merit.
For the best imported bull, ... silver medal,—5
For the second-best do. .... Squarey's Agri. Chemistry and cert. of merit.
For the best native cow, ... silver medal,—4
For the second-best do. .... Dana's Muck Manual and certificate of merit.
For the best imported cow, ... silver medal,—4
For the second-best do. ...., Farmers' Land Measurer and certificate of merit.
For the best pen of cows, not less than five, considering their dairy properties. .... a superior butter tub.

Committee on cattle.—W. Robinson, John Platt, J. S. Caldwell, Samuel Canby, J. S. Naudain and Thomas Blandy.

NEAT CATTLE

UNDER THREE YEARS OLD.

For the best bull calf, from 1 to 3 years old, ...Treatise on cattle.
For the best bull calf under 1 year old, ... Liebig's Chemistry.
For the best heifer calf, from 2 to 3 years old, ... Cultivator, 2 years.
For the best heifer calf, from 1 to 2 years old, ... Cabinet, 2 years.
For the best heifer calf, under 1 year old, ... Practical Farmer.
For the best lot of store calves from 1 to 2 years old, and not less than six in number, ... silver medal,—6

Committee on cattle under 3 years old.—Benjamin Webb, Captain Maxwell, Eli Wilson, Jacob Faris, George Janvier and John Reybold.

OXEN.

For the best pair of working oxen, ... premium yoke.
For the second-best pair of working oxen, ... certificate of merit.
For the heaviest pair of oxen, ... silver medal,—4
For the next do. do. certificate of merit.

Committee on oxen.—Caleb Churchman, P. Reybold, Edward Tatnall, John Higgins, E. T. Bellah and W. Solomon.

SHEEP.

For the best long wooled buck, ... Blacklock's Treatise on sheep.
For the second-best long wooled buck, ... certificate of merit.
For the four best long wooled ewes, ... silver medal,—$3
For the four second-best long wooled ewes, ...certificate.
For the best short wooled buck, ... Treatise on sheep.
For the second-best short wooled buck, ... certificate.
For the four best short wooled ewes, ... silver medal,—3
For the four second-best short wooled ewes, ...certificate.
For the four best lambs of any breed, ... 2 vols. Cultivator.
For the four second-best lambs of any breed, ... certificate.
For the best imported sheep, 2 vols. Cabinet.
For the second-best do. .... certificate.

Committee on sheep.—Bryan Jackson, Henry Dupont, William Bowman, John C. Clark, W. Lovell and Anthony Higgins.

HOGS.

For the best boar over 1 year old, ... silver medal,—$3
For the second-best boar over 1 year old, ... certificate of merit.
For the best boar under 1 year old, Treatise.
For the second-best do. .... certificate.
For the best sow over 1 year old, silver medal,—3
For the second-best sow, do. certificate.
For the best sow under 1 year old, Treatise.
For the second-best, do. certificate.
For the best brood of pigs, not less than 5, ... Agricultural work.
For the second-best brood of pigs, not less than 5, ... certificate.

Committee on hogs.—Samuel Wollaston, John Jones, William Tatnall, William Canby, P. Reybold, jr., and J. L. Miles.

CROPS.

For the best crop of wheat, over 30 bushels per acre, and not less than five acres, premium plough.
For the best crop of corn, over 80 bushels per acre, and not less than five acres, ... premium corn sheller.
For the best crop of barley, over 40 bushels per acre, and not less than five acres, premium harrow.
For the best crop of oats, over 70 bushels per acre, and not less than five acres, premium cradle.
For the best crop of hay, not less than 2½ tons per acre, and not less than five acres, ... premium horse-rake.
For the best crop of potatoes, over 300 bushels per acre, and not less than one acre, premium fluke.
For the best crop of ruta baga turnip, of one acre or more, and not less than 600 bushels to the acre, ... premium drill.
For the best crop of sugar beet, of half an acre or more, and not less than 35 tons to the acre, ... premium drill.

Committee on crops.—William J. Hurlock, George Tybout, M. Churchman, S. P. Johnson, D. W. Gemmill and C. P. Holcomb.

BUTTER.

For the best fresh butter, not less than 10 lbs. .... premium butter cooler.
For the second-best fresh butter, not less than 10 lbs. .... certificate of merit.
For the best potted or preserved butter, not less than 20 pounds, and not less than four months old, ... two stone butter pots.
For the second-best potted or preserved butter, not less than 20 pounds, and not less than four months old, ... certificate.

Committee on butter.—James Canby, John H. Price, Eli Hilles, Henry Latimer, Edward Grubb and Thomas Massey, jr.

CULINARY VEGETABLES.

For the best cabbage, not less than six heads; to be produced on or before the fall exhibition of 1842, - - - - - - Bridgman's Gardeners' Assistant.

For the best cauliflower, not less than three heads, - - - - - - - - - Vegetable Physiology.

For the best kale, not less than three bunches of one pound each, to be produced by November 21st, 1842, - - - - - - - - - - 1 year to Cabinet.

For the best bunch beans, not less than half a peck, to be produced on or before June 25th, 1843, - - - - - - - - - - - - 1 year to Cultivator.

Committee on vegetables.—Merrit Canby, J. T. Price, Edmund Canby, William H. Jones, William R. Sellars and Dr. H. Gibbons.

FRUITS.

For the best strawberries, not less than two quarts, to be produced on or before July 1st, 1843, - - - - - - - - - - - - - - - - Cabinet.

For the best Raspberries, not less than three quarts, to be produced before July 1st, 1843, Cultivator.

For the best early pears, not less than half a peck, to be produced on or before July 20th, 1843, - - - - - - - - - - China fruit basket.

For the best fall pears, not less than half a peck, to be produced on or before November 21st, 1842, - - - - - - - - - - - - China fruit basket.

For the best winter pears, not less than half a peck, to be produced between the 1st and 17th of March, 1843, - - - - - - China fruit basket.

For the best native grapes, not less than 4 bunches, to be produced between the 17th and 22nd October, 1842, - - Bridgman's Gardeners' Assistant.

For the best plums, the least liable to injury from insects, not less than two dozen, to be produced on or before the 5th of October, 1842, Cabinet.

For the best early peaches, not less than half a peck, to be produced on or before September 25th, 1842, - - - - - - - - - - - - - - - - Fruit basket.

For the best late peaches, not less than half a peck, - - - - - - - - - - - - - - - Fruit basket.

For the best quinces, not less than half a peck, to be produced at the fall exhibition of 1842, - - - - - - - - - - - - Cultivator 1 year.

Committee on fruits.—John R. Latimer, Thomas Garrett, Z. B. Glazier, A. S. Read, Dr. H. F. Askew and William McCaulley.

FLOWERS.

For the best varieties of camellias, to be produced to the Society by March, 1843, - - - - Diploma.

For the best varieties of China roses, to be produced to the Society in May, 1843, - - - - - - - - do.

For the best varieties of hyacinths, to be produced to the Society on or before May 20th, 1843, do.

For the six best varieties of tulips, to be produced on or before May 20th, 1843, - - - - - - - - do.

For the six best varieties of dahlias, to be produced on or before October 20th, 1842, - - - - - do.

For the ten best varieties of chrysanthemum, to be produced on or before November 21st, 1842, do.

For the best bouquet exhibited at the exhibitions of the Society, - - - - - - - - - - - - do.

For the introduction of any new and valuable seeds, fruits or plants, presented to the Society during the year 1842-3, silver medal, 3 to 5 dollars, at the discretion of the Board of Directors.

Committee on flowers.—Edward Tatnall, jr., J. P. Garesche, George Reynolds, Dr. H. Gibbons, John Bullock and Dubre Knight.

SILK.

For the best reeled raw silk, if approved, not less than a pound, - - - - - A premium silk reel.

For the heaviest and best cocoons, excluding double ones, in quantity not less than 5 pounds, - - - - - - - - - - - - - - Treatise on Silk.

Committee on silk.—Ziba Ferris, Jonas Pusey, William Webb, J. A. Lockwood, Samuel Buzby, Samuel Hilles.

AGRICULTURAL IMPLEMENTS, &c.

For the best plough, - - - - - certificate of merit.
For the best drilling machine, - - - do. do.
For the best grain or grass sowing machine, do.
For the best mowing or reaping machine, do.
For the best straw and hay cutter, do. do.
For the best root or vegetable cutter, do. do.
For the best corn sheller, - - - - - do. do.
For the best display of Agricultural implements, do.

Any newly invented Agricultural apparatus will be entitled to appropriate premiums.

Committee on Agricul'l implements.—A. Bidermann, William Boulden, Justin Pierce, M. E. Capelle, J. N. Troth and B. Whiteman.

MAIZE SUGAR.

For the largest quantity and best quality of sugar, manufactured from one acre of corn stalks—the premium, Pedder's full set of sugar boilers, adapted to the business.

Committee on maize sugar.—Dr. W. Gibbons, Dr. J. W Thomson, George Platt, Samuel Canby, Robert Churchman and P. Reybold.

Committee on domestic manufactures.—Samuel Buzby, C. I. Dupont, J. Evans Young, Joseph Lloyd, William Webb and Andrew Gray.

Standing Committee on Horticulture—perishable articles.—J. W. Thomson, Merrit Canby and Dubre Knight.

Ploughing match for horses and oxen, to take place on the second day:—the premium to be a premium plough.

Judges.—Edward Tatnall, John Richardson, J. C. Clark, J. J. Brindley, Jesse Gregg and P. Reybold.

No animal shall take the same premium a second time.

All articles exhibited will be returned to contributors, unless otherwise directed.

If, of any article for which a premium is offered, no specimen be submitted worthy of distinction, the Society reserves the power to withhold the premiums, and in all cases where premiums shall be demanded, they will require such evidence from the claimants, as shall be satisfactory to the directors. No person shall be entitled to a premium for any animal which he shall not have had, or possessed, at least six months immediately preceding the time of exhibition, said animal to have been raised in this county—imported animals excepted. It is to be distinctly understood, that all grain, vegetables, &c., produced for competition, shall be the growth of the producer.

All premiums not demanded within sixty days after they shall have been awarded, shall be deemed as having been generously relinquished to aid the funds of the Society. The object of the Society in offering these premiums, is simply to excite a spirit of emulation amongst cultivators to improve the varieties of fruits, vegetables and other productions. It is desirable that each kind of fruit offered for competition, may be as numerous as possible, regard being had to produce none but of fair quality. Each article should be accompanied by its appropriate name. It is also desirable that the articles exhibited, should be accompanied by short observations on the mode of culture, with any other remarks deemed to be of utility.

The judges are authorised to withhold premiums where none is entitled to distinction; and where but one of a class is exhibited, they will award such premium as they think it merits. Those who intend to compete, must inform the Committee of Arrangement before 11 o'clock on the day of exhibition.

All stock, &c., contributed, must remain on the ground during the exhibition; and all stock intended for sale, will be required to be registered in a book provided by the Committee of Arrangement, at the following rates: For each horse, $2: for neat cattle, $1 each; for hogs and sheep, 50 cents each.

Articles that are designed to compete for premiums, will be produced when practicable, at the fall or spring exhibitions of the Society, of which public notice will be hereafter given. Perishable articles may be offered at any of the meetings of the Society, or at those of the Directors, which take place on the afternoon of the second Saturday of every month, in the City Hall; or they may be subjected to the inspection at any time, of either of the following committee appointed for that purpose, viz:

DR. J. W. THOMSON,
MERRIT CANBY,
SAMUEL HILLES,
PHILIP REYBOLD,
HENRY GIBBONS,
ANTHONY HIGGINS,
DR. W. GIBBONS,
ZIBA FERRIS,
W. J. HURLOCK.

The Society will dine together at 3 o'clock. All members *not* in arrears to the Society, will receive their tickets to the dinner free of charge. The annual address will be delivered by the Hon. JAMES M. GARNETT, of Virginia, on the evening of the first day at the City Hall.

Horticultural Exhibition.

The Pennsylvania Horticultural Society will hold its Fourteenth Exhibition in the Lower Saloon of the Philadelphia Museum, corner of Ninth and George streets, on Wednesday, Thursday and Friday, the 21st, 22nd and 23d of September.

The Committee of Arrangements solicit contributions of Plants, Fruits, Flowers, or Culinary Vegetables; and specimens of a quality meriting distinction, will be thankfully received and publicly acknowledged. When transmitted from a distance, by public conveyance, the Society will cheerfully defray the cost of transportation. They may be addressed to Messrs. D. Landreth & Co., at their Seed Warehouse, No. 65 Chestnut street.

The following Premiums to be competed for on that occasion, will be awarded at 12 o'clock, M., on the first day (21st) of the exhibition, viz:

NATIVE GRAPES.

For the best Isabella, not less than 6 bunches,	$3
For the second-best Isabella, not less than 6 bunches,	2
For the best Bland or Powell, not less than 6 do.	3
For the second-best Bland or Powell, not less than 6 bunches,	2
For the best Catawba, not less than 6 bunches,	3
For the second-best Catawba, not less than 6 bunches,	2
For the best Native grapes, of another variety, not less than 6 bunches,	3

FOREIGN GRAPES
RAISED IN THE OPEN AIR.

For the best black or red Hamburgh, 4 bunches,	$5
For the best Hansteretto, 4 bunches,	5
For the best black Constantia, 4 bunches,	5
For the best Chasselas, 4 bunches,	5
For the best white Gascoigne, 4 bunches,	5
For the best white Frontignac, 4 bunches,	5
For the best white Malaga, or white Portugal, 4 bunches,	5
For the best foreign grapes, of another variety, 4 bunches,	5
For the best foreign grapes, raised under glass, without the means of artificial heat, 4 bunches,	5
For the second-best foreign grapes, raised under glass, without the means of artificial heat, 4 bunches,	3
For the best foreign grapes, raised under glass, with the means of artificial heat, 4 bunches,	5
For the second-best foreign grapes, raised under glass, with the means of artificial heat, 4 bunches,	3
For the best peaches, not less than 1 peck,	5
For the second-best peaches, not less than 1 peck,	3
For the third-best peaches, not less than 2 dozen,	3
For the fourth-best peaches, not less than 1 bushel,	10
For the fifth-best do. do. do.	5
For the best Seckel pears, not less than 1 peck,	$3
For the best butter do. do do.	3
For the best pears, of another variety, not less than 1 peck,	3
For the best apples, not less than 1 peck,	3
For the second-best apples, not less than 1 peck,	2
For the third-best apples, not less than 1 bushel,	5
For the fourth-best apples, not less than 1 bushel,	3
For the best quinces, not less than half a peck,	3
For the best nectarines, not less than one dozen,	3
For the best water melons, not less than three in number,	5
For the second-best water melons, not less than three in number,	3
For the best nutmeg melons, or variety thereof, not less than three in number,	3
For the best potatoes, not less than 1 bushel,	2
For the best sweet potatoes, not less than 1 bushel,	2
For the best onions, not less than 4 dozen,	2
For the best cabbage, not less than 6 heads,	3
For the second-best cabbage, not less than 6 heads,	2
For the best red cabbage, not less than 6 heads,	3
For the best carrots, garden culture, 2 dozen,	2
For the best lettuce, not less than 6 heads,	2
For the best endive, blanched, not less than 6 heads,	2
For the best salsify, not less than 2 dozen,	2
For the best fifty varieties of dahlias,	10
For the second-best fifty varieties of dahlias,	5
For the best twenty varieties of dahlias,	5
For the second-best twenty varieties of dahlias,	3
For the best American seedling parti-coloured dahlia,	3
For the best American seedling self-coloured dahlia,	3
For the best ten varieties of dahlias, grown by amateurs,	5
For the second-best ten varieties of dahlias, grown by amateurs,	3
For the best dahlia, grown by amateurs,	3
For the best and most appropriate design, formed of cut flowers, etc.,	20
For the second-best and most appropriate design, formed of cut flowers, etc.,	15
For the third-best and most appropriate design, formed of cut flowers, etc.,	10
For the best pair of wreaths for festooning,	10
For the second-best pair of wreaths for festooning,	5
For the best bouquet,	5
For the second-best bouquet,	3

To prevent confusion, it will be necessary that all contributions be presented on the Monday and Tuesday previous to the exhibition. Bouquets on the mornings of each day.

All articles will be returned to the contributors, unless otherwise directed; of which the committee will expect to be duly notified.

ROBERT BUIST,
PETER MACKENZIE,
WILLIAM CHALMERS, Jr.,
JAMES D. FULTON,
JOHN DICK,
Committee of Arrangement.

No man can ever borrow himself out of debt. If you wish for relief, you must work for it, economise for it. You must make more and spend less than you did while you were running in debt. You must wear homespun instead of broadcloth, drink water instead of champagne, and rise at four instead of seven. Industry, frugality, economy—these are the handmaids of wealth, and the sure sources of relief. A dollar earned is worth ten borrowed, and a dollar saved is better than forty times its amount in worthless gewgaws. Try our scheme—it is much better than to depend upon bank favours, and a thousand times more honourable than a resort to bankrupt laws.—*Selected.*

Hints to Farmers.

A FARMER should never undertake to cultivate more land than he can do thoroughly; half tilled land is growing poorer; well tilled land is constantly improving.

A farmer should never keep more cattle, horses, sheep or hogs, than he can keep in good order; an animal in high order the first of December is already half wintered.

A farmer should never depend on his neighbour, for what he can by care and good management, produce on his own farm; he should never beg fruit while he can plant trees, or borrow tools when he can make or buy them—a high authority has said, the borrower is a servant to the lender.

A farmer should never be so immersed in political matters as to forget to sow his wheat, dig his potatoes and bank up his cellar; nor should he be so inattentive to them as to be ignorant of those great questions of national and state policy, which will always agitate, more or less, a free people.

No farmer should allow the reproach of neglected education to lie against himself or family—if "knowledge is power," the commencement should be early and deeply laid in the minds of his children.

A farmer should never use intoxicating liquors as a drink; if, while undergoing severe fatigue and the hard labour of the summer, he would enjoy robust health, let him be temperate in all things.

A farmer should never refuse a fair price for any thing he wants to sell: we have known a man who had several hundred bushels of wheat to dispose of, refuse eight shillings, because he wanted eight shillings and six pence, and after keeping his wheat six months was glad to get six shillings for it.

WE see it stated that a barrel of American salted beef, imported into Dundee, Scotland, under the new English tariff, was brought to Perth, and sold at three pence per pound. The meat is said to be of good quality, fat and well flavoured. We believe, says the paper, that the regular supply of this novel commodity, will now be obtained in this quarter. We are informed that a quantity of American mutton hams, have also been sold at three pence per pound.

TO MAKE HOMINY.—Take the white flint corn—the same as is used in the southern states, let the miller pass it through the hopper as coarse as possible; take what quantity is wanted, and sift it in the usual meal sieve; blow out the hulls, then wash; put it in the pot with plenty of cold water and a little salt; boil till soft, which will be in about an hour or so.

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

PHILADELPHIA, EIGHTH MONTH, 1842.

New-Jersey Marl beds.

WE have rarely passed a day more pleasantly, in any little excursion, than we did the 2nd and 3d insts., in company with our highly valued friend, EDMUND RUFFIN, editor of the "Farmers' Register." He was desirous of viewing some of the *marl beds* of New Jersey, and we made a flying visit to a few of them in Gloucester county, about five miles south-east of Woodbury. There has already, been a good deal said and written, upon these remarkable deposites; as well as upon the almost incredible effects, that have resulted from their application to the soil; but much more information is requisite, before their value will be thoroughly appreciated, or their character distinctly understood, especially, by those who have not seen them. It is not our intention to make even the attempt, to throw any new light upon this exceedingly interesting subject; but merely to name the places we visited,—a few of the results mentioned, as having grown out of the use of marl, and to draw if possible, the further notice of others, to these abundant sources of wealth, to our native state.

It is well known the marl region of New Jersey, stretches through the interior of the state, from Monmouth, across the entire breadth of Burlington and Gloucester counties, and penetrates, also, the upper parts of Salem. The beds lie at various distances from the surface, and of course offer every difference of facility in excavating them, and are overlaid by a great variety of material. Our friends Benjamin Whitall, and William R. Tatum, accompanied us in our ride, and from their familiarity with every location in their neighbourhood, were enabled to make many interesting statements, with respect to the change which the use of marl has made in the face of the country. We visited the marl bed of James Davis, which lies a mile and a half east of Woodbury, and two or three miles to the west of the western limits of the district which includes the green-sand marl. It lies in the bottom of a valley, covering a few acres, and is overlaid with bog iron ore, of so much richness, as to have been purchased some fifteen or twenty years ago, by a person of the name of Richards, and transported, principally by water, to his Iron works on Egg-harbour river. This marl appears to be intermixed with sand and clay, as well as some ferruginous matter, and is apparently destitute of any calcareous substance. The owner has used it recently to great advantage; and William R. Tatum showed on some of his own higher ground, a lightish sandy loam, evidences of great beneficial results from its application to grass. We next called upon our friend John L. Cooper, of Good Intent, near Blackwoodtown, who showed two beds at different elevations, in the hill on the north-west margin of his mill pond. This is a hard, reddish coloured substance, with a good many decomposed shells, and smelling considerably of sulphur. It was used to some extent, and to some advantage, thirty years ago, but is now neglected. A mile further on, a little beyond Blackwoodtown, and on the same stream,—the head of Timber creek,—is David E. Marshall's genuine green sand marl; apparently the *pure* substance. This lies in the hill, on either side of the stream, is ten or fifteen feet in thickness, and is overlaid by four, five, or six, or eight feet of sand and gravel, and also by a hard material of a few inches thickness, resembling iron stone. This marl is much used, and to great purpose. It is hauled ten or twelve miles, and with the other marls of the neighbourhood, is generally spread as a top dressing upon grass, in the spring, at the rate of ten to fifteen tons per acre. On enquiring at the pit, of a person who was digging and hauling it away, whether the owner, D. E. Marshall, had himself used the material to much extent, and to great advantage; he replied in the affirmative, with a look of astonishment that such questions should be asked, and an earnestness of manner, that was a strong pledge of his sincerity. In looking for proofs of its usefulness on D. E. Marshall's farm, he said we could hardly go amiss. We, however, did not walk over the farm—we had not time to do so; but the fact, that its fertility had been vastly increased by the application of this marl, was familiar to three of us. We next passed on to the extensive excavations of Josiah Heritage, on the head waters of Mantua creek, and two or three miles south-west of D. E. Marshall's. This also, is green sand, or as it is also, often called, gun-powder marl, of the first quality. It is carted ten or a dozen miles, and applied with an effect that is really astonishing. Among the green sand, which is from ten to twenty feet in thickness, no organic remains are to be discovered. It lies on either side of the creek. The present operations are on the north side. It is covered with sand and gravel to the depth of six or eight, or ten feet, as well as by a marl of a reddish brown appearance, that is of considerable value, though far inferior to the green sand marl. In some places, a solid layer of what were once shells, fifteen or twenty inches in thickness, separates the sand and clay, &c., from the upper, and less valuable stratum of marl* just mentioned. And the green sand itself, lying along a little ravine that juts up from the main stream, is overlaid by a dark brown limestone, ten or twelve inches in thickness. This stone is intermixed a good deal with shells, and a kiln has been built on the adjacent hill side, for burning it. We had not the satisfaction of seeing J. Heritage himself, and could not of course, ascertain exactly the quantity annually taken from these pits. Our friends however, who are familiar with the operations there, drawing away, themselves, more or less every season, believed that six or seven thousand tons must have been removed last winter. It is sold by the rod, or by the ton, say 10 to 15 dollars the square rod, and the purchaser digging it himself, or 37½ cents a ton, the owner uncovering it, and making it of easy access to the team.

The green sand marl of this neighbourhood, and it is of that only we speak, is best adapted to what are often called *natural* meadows—to lowish, moist, but drained lands—to cold, sour, quicksandy soils, where the springs are near the surface, and the virgin soil was naturally poor. These are the soils that the gunpowder marl of this vicinity, best suits. We do not say it does not benefit some other soils; but from all we learned, and from our own experience, it does little or no good, when spread on grass, on a light, sandy soil; and especially if the sandy soil reposes upon a sandy subsoil. All the different marls of the neighbourhood, however, appear to be decidedly beneficial to a potatoe crop, and that too, on every variety of soil, at all suitable for potatoes.

On the road from D. E. Marshall's to J. Heritage's, we passed through the farm of Thomas Chew. It contains 160 or 175 acres of cleared land. Eight years since, it was poor, and exceedingly unproductive, scarcely affording pasture and hay, for eight or ten cattle and horses. Some six years since, the owner, observing what was passing around him, and concluding that Heritage's marl was adapted to his land, entered with considerable and praiseworthy spirit into the work, and has marled nearly all his farm. We were assured that, during the summer just passed, more than 100 tons of hay were cut on this same plantation, and that the summer stock, is at least, quadrupled.

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* All earths are called *marl*, in this neighbourhood, that are found useful for agricultural purposes, when applied to the soil.

On Joseph Whitall's farm, one mile southeast of Woodbury, is a bed of dark bluish clay, intermixed with shells, which he has used to considerable advantage on his higher and lighter grounds, where the green sand marl is of little or no use. A much heavier dressing, however, is necessary with this material, than with the green sand, on the lower grounds. This farm, with those of W. R. Tatum, Joseph D. Pedrick, James Davis, D. E. Marshall, Thomas Chew and J. Heritage, were named to us, as having been vastly improved by the application of marl. On many others in the neighbourhood, similar improvement, is perhaps not less obvious. The above are named, because we passed through, and saw them ourselves, in our little ride. One more fact, and we are done. All the beds of good green sand marl, that we have any knowledge of, in the counties of Burlington, Gloucester and Salem, lie on the head of our creeks, above the reach of the tide, and west of the ridge which separates the streams of the Atlantic from those which flow into the Delaware.

It was said above, that nothing new was to be looked for, in these cursory remarks. They have been confined to what came under our own eye. Speculation has been avoided. We do not undertake to say, of what these extraordinary deposites are composed; how, or whence they have been gathered, or in what their fertilizing quality consists; and for this very plain reason, we do not know any better than our readers. We anticipate, and we partly promise to the public, an article from our friend of the Farmers' Register, worthy of himself, and creditable to this broad subject. We shall impatiently await its appearance.

It is said that in 1839, there were upwards of 30,000 tons of *bones* imported from foreign countries into Hull; and that in 1837, the value of the article imported into England, was nearly a million and a quarter of dollars. We remember to have seen a notice some months ago, of an exportation of bones from our own port, to Liverpool. Now is it possible that the enterprise and good judgment of our farmers, will allow John Bull to carry our bones 3000 miles to spread upon his lands, and they themselves stand by, as if they thought them hardly worth the grinding! We are apprehensive that *bone dust* is not sufficiently appreciated in this vicinity, or the material would not be sent from our very elbows, to enrich the broad pastures of England.

In a letter received on the 9th inst., from a valued friend and subscriber at Cherokee, in the Cherokee nation, Ark., he says, "can you favour us with instructions for building chimneys, so as to insure a good draught for smoke, and at the same time, the greatest amount of heat in the room? Also good plans for the arrangement of farm buildings?" Will some of our friends advise us on these points?

The next cattle show and fair of the NEW YORK STATE AGRICULTURAL SOCIETY, is to be held at Albany, on the 27th, 28th, 29th and 30th, of this month. The list of premiums, amounting to about $2000, embraces almost every variety of farm stock and implements—farm and garden products—butter, cheese, maple sugar, silk, and other domestic manufactures, &c., &c.; being a more extensive list than has been heretofore offered in New York. On the 30th will be a public sale of such stock as shall be sent in for that purpose.

The Society offers for the best popular treatise on Agricultural Chemistry, a premium of $100. For the best essay on rotation of crops, best suited to the soils of New York, $20. For the best essay on the general management of the farm, $20. For the best essay on the introduction of new agricultural products, $20. For the best essay on the management and application of manures, $20. To the painter of the best specimens of original portraits of domestic animals, a gold medal. To the engraver of the best specimens of portraits of domestic animals on wood, a gold medal. For the best plan of farm house, barn, and necessary out buildings, a gold medal. And for the best specimen of floral painting, a silver medal. The premiums for essays and to artists, just named above, as well as for agricultural implements, are open to the United States. Competitors for premiums on essays, will forward their manuscripts to Luther Tucker, recording Secretary, Albany, previous to the close of the present year.

The AGRICULTURAL SOCIETY of Newcastle county, whose list of premiums, &c., will be found in this No., is anticipating one of the largest and most enlivening exhibitions it has had since its incorporation in 1836. It will be observed that agricultural works of merit and implements of husbandry, constitute the principal rewards. This strikes us as a particularly appropriate method of dispensing the means of the Society, and throwing abroad a great deal of information that cannot fail to be lastingly useful. JAMES M. GARNETT, of Virginia, will deliver the annual address. To "little Delaware," we say, with all heartiness, "*go ahead.*"

OUR market is deservedly famous for the superior quality and abundance of its vegetables, as well as for their early appearance. We give a list of premiums to be awarded by the PENNSYLVANIA HORTICULTURAL SOCIETY, at its exhibition in this city, next week. Competition, it will be observed, is not confined to members, or to citizens of this state, but is liberally thrown open to the whole country. Our friends from Jersey, we trust, will again sustain its character, in the exhibition of articles, to which its fine soil is so peculiarly congenial.

Persons, we think, should not be deterred from contributing to the display, however small the offering—nor withhold any appropriate object, though it may not be named in the list.

Contributors will receive a ticket of admission to the exhibition, when opened.

The quantity of rain which fell during the 8th month, (August,) 1842, was rather more than three inches and three quarters. .... 3.786 inches. And the quantity which has fallen for the first eight months of the year 1842, is nearly 38½ inches.

Pennsylvania Hospital, Ninth month 1st, 1842.

Joseph Dresser, who has for several years acted as agent for our paper, particularly in Chester, and the adjacent counties in this state, has not been heard from for a long time. Our friends will *please notice*, that he is no longer authorized to receive monies on our behalf. We would be glad to see him.

Such of our friends as have heretofore paid their subscriptions to him, can readily avail themselves of the kindness of post-masters, and communicate directly with this office. Indeed, persons generally, whose subscriptions were originally obtained by *agents*, can, when those agents fail to call upon them, communicate in the same way, directly with us. In such cases, receipts will be forthwith returned.

A list of premiums, &c., offered by the Philadelphia Agricultural Society, at the exhibition to be held at the Rising Sun, on the Germantown road, on the 12th and 13th of next month, was published in the Cabinet, in the Fifth month last. We again call the attention of those interested, to it. A public sale of stock, conducted by Wolbert & Herkness, will be made on the 13th, the second day of exhibition.

P. W.'s communications were received on the 9th.—It was impracticable to insert them in this number.

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The following are the prices at which the Durham stock of JAMES GOWEN, Esq., to which attention was called in our last No., was sold on the 8th instant, to wit:

Roan Anna,	4 years old,	Bought by	—— Calvert, of M'd.	$ 125
Gloucester,	4 months,	do.	—— Chorley, of Pa.	50
Pocahontas,	6 years,	do.	—— Calvert, of M'd.	150
Young Cherry,	21 months,	do.	—— Ashmead, Pa.	80
Roanoake,	5 months,	do.	—— Calvert, M'd.	60
Victoria,	8 years, nearly,	do.	—— Leiper, Pa.	100
Simon Snyder,	16 months,	do.	—— Ashmead, do.	102 50
Juno,	19 months,	do.	—— Calvert, M'd.	155
Calisto,	6 months,	do.	—— Kelly, Pa.	100
Rosy Ann,	7 months,	do.	Dr. Thompson, Del.	70
Dolly,	2 years,	do.	—— Calvert, of M'd.	120
Young American Comet,	3 months,	do.	G. M. Alsop, of Pa.	30
Young Rowan,	8 months,	do.	A. Clement, do.	40

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Hints for the Improvement of Agriculture.

UNDER the above head, there are contained some invaluable remarks in the last number of the Quarterly Journal of Agriculture, on the effect of Leases in the holding of farms, whether as it regards the welfare of landlord or tenant. The writer observes, "My object is, to suggest to the land-owners, the propriety of abandoning the practice of letting their farms from year to year, and of adopting in lieu thereof, short leases (!) of, say from twelve to twenty years. The first grand evil of the tenant-at-will system is, that it checks the spirit of agricultural improvement. When agriculture was, to all appearance, a *stationary* practice, this method of letting the land might have little effect of consequence to the farmer; but *now*, that it has become a progressive science, how many impediments does the system oppose to its equal progress as a practice? We know that every change from evil to good in management, involves an outlay of capital; we know, too, that in every field there is an unworked mine of agricultural wealth—but it cannot be brought to light without an expenditure of money, which, once sunk in the soil, can only be recovered in the course of years. Can the farmer then, who has his farm from year to year only, with justice to himself and family, enter freely on this outlay? He may do something, but how much less than he ought to do? and how many are there who will do nothing in such cases, except what is compulsory; and are they blamable? Human prudence, family affections, aye, and selfish care, will oppose many and pungent obstacles to a man's investing his capital in a speculation, the proceeds of which he may never be permitted to reap; for though he may actually be safe, he has no real security that he is so; and the very idea of this, is enough to alarm his worldly prudence, and effectually to put away his ideas of permanent improvements or large outlays. But were the tenant ever so confident in the faith of his landlord, his landlord is but a man, and as such he *may* err, and he *must* die! and the same rule applies to the tenant himself; yet if either of these contingencies should happen to one or the other, what is the consequence? If either of the parties should err—and the tenant can no more answer for himself than he can for the owner of his farm, and necessity may tempt either to do that which is not strictly just—misconceptions might arise and proceedings result, the consequence of which, if it be merely a separation of interests in the eye of the land owner, is ruin to the too confiding tenant, whose little whole is invested in the soil. And again, if either should die, where is the tenant's capital? If the event brings a change of ownership, who can answer for the conduct of the new possessor? he may look with a mistaken view on the subject; and if he has purchased the farm, he may suppose he has purchased it *as it is*, and not *as it was* before the tenant had employed his capital upon it; and then the latter will have the hardship of paying interest, in an increase of rent, for his own money. Or trustees may become in possession, and justice to the interests of their ward, may overbalance generosity to the tenant. And should the tenant, under these circumstances, die—what is his death-bed consolation? Why, that with him dies that which should have ministered to the comfort of the widow and the fatherless! And this is a case which has been too often verified—can it then be maintained that the system of year by year leases, does not check the progress of agricultural improvement? When we look around and see how many of the present race of yearly tenants have progressed in intelligence—when we witness what advances they have made in the practice of agriculture in spite of this miserable system, we may judge of the improvement which would spread over the face of the country, were the tenant able to make himself certain of reaping the reward of his labour. As it is, however, we may set it down as an incontrovertible fact, that the farmer can never be benefited, as he ought to be, by modern improvements, until he becomes *a free agent*—and *that* he never can become, while another possesses absolute power over his capital; for whether or not this power is used, it is the same; he can have no real confidence while exposed to so many contingencies, the happening of any one of which, robs him and his family.

"Now when we take these things into consideration, and connect them with the peculiar disadvantages that the farmer has to contend with; when we reflect that under the most favourable circumstances, his ordinary outlay of capital is two years before it returns to him with interest; that this capital is all the time at the mercy of fickle seasons, from one end of the year to the other; that he has, after all, to stand the chances of the market, and that, in addition, under the year to year tenancy, he has no certainty but that the talent which *he* invests may be taken by another, there is no wonder that he should be slow to adopt improvements, or that he should be loath to put more on his farm than he can recover in a short time—indeed, under such a system there must be a large proportion of bad farmers, for the bold and intelligent man cannot prudently carry out all he knows; he cannot depend upon the future, and is compelled to decline those permanent *outlays*, which, in the course of time, would be of permanent profit, and to turn his attention merely to the exigencies of the present. And on the other hand, the fearful and anxious tenant manages, as it were, from hand to mouth; invests no capital that he cannot call back quickly, and holds himself always ready for the worst: under these conditions, therefore, the farmer is a speculator upon terms peculiarly disadvantageous; he has difficulties, *known and certain*, greater than any other trader; but as a tenant-at-will, he has an *uncertainty* which represses his exertion by far the most; for the former he sees and prepares to grapple with, but the latter hangs over his head like the sword of Damocles—as by a thread—and he fears it may come upon him when least he knows: under its influence, therefore, all his efforts are paralyzed. Such, then, is the evil of yearly tenancy; it gives no security to the tenant for any outlay; he is bound to risk his capital in the face of many contingencies, or to make as few improvements as possible; and the consequence is, that where one has the *blind faith* to employ his capital liberally, there are ten, whose caution conquers the spirit of improvement altogether.

"And there are other evils attendant on the system which are not uncommon; one is, the facility which it affords to men without skill or capital, to get farms; and another, the temptation it holds out to the needy man to make a temporary convenience of a farm. Thus, as regards the first, how often on the occasion of a farm being at liberty, do we see applicants, who know nothing of its nature or of the capital it requires, hurrying to take it, on the presumption, that if the late tenant paid the rent, *they can;* and in regard to the second, a man is often impelled to make such an engagement, although not exactly to his mind, as a convenience, and until he meets with something that suits him better; and the results may be easily defined; for if the farm be out of order at first, the tenant who takes it as a convenience, and on a determination to get all he can from it without cost, soon finds *that it won't bear robbery;* but he finds likewise, that it won't do to expend money on it—he is therefore content to take what it gives, and to return it nothing; and he robs it, or it robs him, until there is no more left to rob. In the other case, a tenant finds himself on a farm with a supply of capital below the demand; his farm wants improvement, but it must be done bit by bit; 'he must see how it answers;' and of course, as under this sort of management it grows worse, his land goes half stocked, his crops fail, and he finds himself in difficulties before he knows how to turn himself; the capital he had, has melted, and that without making any reform in the condition of his farm, and in a short time he is left in penury and in the possession of a farm, which, after such a course of negligence, requires a capital double what it ought to do; and these are by no means supposititious cases. To prevent all those evils, let us remove from the tenant his doubts; let us secure to him and his family the interest of his capital; let us afford him a moderate length of tenure on his farm; and by thus making him independent of contingencies, and giving him time to rally against any unforeseen and untoward circumstances, he will be taught to make the best and quickest of his capital in the permanent improvement of his farm, and what is *necessary* will then become *politic;* there will be no anxiety in making the outlay, and no fear of reaping the benefit."

Now, knowing that my neighbour and excellent manager, Josiah Long, held his farm on yearly tenure, I called on him last evening, and read to him the above extracts, upon which he exclaimed, "that's a true chapter, and every verse is a fact. Here have I been, for these eleven years, without the slightest security for the future, save only for the year that I had entered upon; with my hands tied, and unable to do justice either to myself or the farm; afraid to do much, lest my rent should be raised, and fearful to do too little, lest my means of living should be abridged. I declare I have sometimes trembled, for fear my landlord should notice the goodness of my crops and raise upon me—a mere creature of circumstance, and never knowing how to act. And now, just as I had ventured to do something by way of present improvement, comes my landlord, and informs me he shall take the farm into his own hands in April, by which my family will be deprived of a home. Of this, however, I have no right to complain—and I do no such thing; but the consequences are as injurious to me as though I did." I asked my friend, what would be the result if his landlord should come to him and say, I have had experience of your integrity and industry, and am come to offer you a lease of my farm for 21 years certain, at a fair money rent; with full permission to act in all cases as you would do, were the farm your own? "The result?" he replied, "why you would never see another weed on the place; I would make a good road right through the farm, and keep it so; every arable field should be Prouty-ploughed and subsoiled, and a thousand loads of muck and dung a year should be formed into compost and carried abroad. I would make a new gravelled entrance to the house, and my wife should have a fruit and flower-garden right away. The big meadow I would under-drain and top-dress, and then I should grow hay instead of weeds and rushes. And to be enabled to do this, I would draw out the few hundred dollars which I have now at interest on another person's farm, and which, in the shape of manure, I know I could make pay 40 or 50 per cent. interest, and no fear for the result; knowing, too, that if I died, my wife and family would enter into my labours, and derive a comfortable maintenance from the investment. I should then flourish—I have hitherto only subsisted—and the farm should show the effects of the 'result,' as well as myself."

I confess I was exceedingly pleased with his remarks, and believe sincerely, that the "result," in his case at least, would be as he has pictured it. S.

Lower Merion, September 12th, 1842.

Never reprove children severely in company, nor make light of their feelings, nor hold them up to ridicule.

American Trees.

By John Pearson.

In Georgia, many black oak trees are 8, 9, 10, or 11 feet in diameter; 5 feet above the surface, we measured several above 30 feet girth, perfectly straight, 40 or 50 feet to the limbs. The trunks of the live oak are generally from 12 to 18 feet in girth, and sometimes 20; some branches extending 50 paces from the trunk on a straight line; and cypresses are there found from 10 to 12 feet in diameter, and 40 to 50 feet to the limbs.

In 1791, a yellow poplar grew on the lands of Charles Hillyard, Kent county, Del., 36 feet in circumference, very tall, and to appearance sound. McKensie says, in latitude 52° 23′ 43″ north, are cedars 24 feet in girth, and that canoes made of them will carry 50 persons. An alder 7½ feet in circumference, measured 40 feet without a branch. In 1785, about two miles from Morgan town, Virginia, a walnut tree measured 19 feet in circumference, retaining its thickness well to the forks, about 60 feet.

In Harrison county, Virginia, a poplar tree was 21½ feet in diameter, 5 feet from the ground, and 60 feet to the branches: and a vine measuring near 2 feet in diameter.

In Lycoming county, Pennsylvania, the sugar maple is found 4 feet in diameter. A cherry tree, 5 feet from the ground, measures 14 feet four inches round, and carries its thickness well, near 60 feet to the branches. A white oak, 3 feet from the ground, 15 feet in diameter, and 70 feet without a limb; some of the limbs were 2 feet six inches in diameter.

In Evesham, Burlington county, New Jersey, were three white oaks, the stump of one of them was 11 feet five inches in diameter, and 59 feet to the forks: from it were made forty thousand merchantable barrel staves; it was three hundred years old, and to cut it, it was found necessary to weld two saws in length together. The second of these trees, 4 feet four inches from the ground, was upwards of 27 feet in circumference, and 60 feet to the first fork. The third, at the same height from the ground, measured 24 feet round. The first of these trees was said to be perfectly sound at the heart.

In 1791, a hollow buttonwood tree, or sycamore, on the south-east side of the Ohio, fifteen miles from Pittsburg, 4 feet from the ground, was 39 feet in circumference.

At Peach-bottom ferry, on the Susquehanna, was a poplar 11 feet in diameter; it was hollow, and a school was kept in it.

On Sandy-lick neck, Pennsylvania, was a

pine tree 12 feet in diameter, and at 12 feet from the ground it divided into branches. On the south branch of the Potomack, was a sycamore, 9 feet in diameter. On the dividing ridge, which separates the waters of the Pymatung, or Shenango, from those which fall into lake Erie, grew a white oak, which at 4 feet from the ground, was 24 feet round, and 40 feet to the first branches; and a spanish oak about an equal size. A chesnut was upwards of 24 feet in diameter, at 3 feet from the ground. A poplar, 28 feet four inches in circumference, and a white pine about the same size.

A wild cherry, on the western waters, or those of Susquehanna, was supposed, by competent judges, large enough to make ten thousand feet of inch boards, exclusive of several large limbs, which would cut good saw logs.

A white pine grew on the Hudson, 24 feet six inches to the limbs, and 5 feet in diameter; and another near Le Bœuf, Waterford, Pennsylvania, 30 feet in circumference.

In Wayne county, Pennsylvania, are white oaks, white ash, and cherry trees, 5 feet in diameter, and from 50 to 80 feet in length; and white pine nearly 7 feet in diameter, all remarkably clear of knots.

A black walnut, near the Muskingum, Ohio, at 5 feet from the ground, measured 22 feet in circumference; and a sycamore near the same place, measured 44 feet round.

In Crawford county, Pennsylvania, was a Hemlock 26 feet round; and a poplar 25 feet, healthy, and likely to grow many years. Also a chesnut in Erie county, 30 feet round.

A poplar in Adams county, Pennsylvania, 36 feet round, and 30 or 40 feet to the forks, appears perfectly sound.

In Brush valley, Northumberland county, a walnut tree 22 feet round, 25 feet to the forks, perfectly sound to appearance.

On Norris's island, in the river Juniata, Pennsylvania, is a sycamore 27 feet nine inches round; at 5 feet from the ground it divides into four forks, one of which measures 15 feet nine inches in circumference, another 10 feet six inches, and one 8 feet in circumference.

In Springfield, Delaware county, Pennsylvania, is a sycamore, which in 1803, was 19 feet six inches round, very thriving.

On an island in the Ohio, thirteen miles above Marietta, grew a tree, the stump of which, 12 or 15 feet high, was standing in 1798, it was hollow, the circumference was about 60 feet, the shell two or three inches thick, diameter inside, upwards of 18 feet.

An apple tree now growing (1807,) in Upper Darby, Delaware county, Pennsylvania, measures 10 feet four inches in circumference, sound and thrifty.

In Luzerne county, a white pine was felled, only fourteen inches in diameter, but measuring *one hundred and twenty feet to the first branch!*

A chesnut sapling in Chester county, Pa., made nine rail cuts, of 11 feet each; the butcut made ten rails, the last cut made one.

In relieving the garrison of Oswego, one birch canoe came in, which measured 45 feet in length, and 7 feet in breadth.

A poplar grew near the Virginia head of Roanoke river, 39 feet round 4 feet from the ground, about 40 feet to the forks.

In Lower Chichester, Delaware county, Pennsylvania, a black oak tree was felled in 1790, which was 8 feet in diameter.

In 1807, a hickory tree on the banks of the Ohio, measured 16 feet eight inches in circumference, very lofty, and kept its thickness well. And an ash on the Mississippi, 17 feet in circumference, and very tall.

In Vermont, a white pine grew, 6 feet in diameter, and 247 feet in height.

A white pine was cut at Dunstable, New Hampshire, in 1736, which measured 7 feet eight inches in diameter.

In 1803, a person saw a white walnut tree near lake Erie, only seven and a half inches in diameter, and 63½ feet to the first branch!

In Alleghany county, Pennsylvania, a white oak tree measured 15 feet six inches round; a sycamore, 33 feet round and perfectly sound; a sugar maple, 15 feet round; a walnut tree, near Big Beaver, west of Ohio, 18 feet six inches round; a thorn tree, in Mercer county, Pennsylvania, 5 feet round; a white oak, near the falls of Big Beaver, Beaver county, 18 feet six inches round, 60 feet without a limb; and at that height, 4 feet in diameter. A spanish oak on the east side of the Ohio, 29 feet six inches round; and at John Hunter's, Newton township, Delaware county, Pennsylvania, is a chesnut tree 27 feet in circumference. A walnut tree, in Genesee, New York, 21 feet in circumference. A sugar maple, on the banks of Mahoning, Mercer county, Pennsylvania, 16 feet eight inches round; and a poplar tree, between the Shenango and Neshannoch, 21 feet in circumference.

To choose a stock of bees.—Place your ear close to the hive and give it a tap; if the inmates give a short and sudden buzz, all is right: but if it be a languid hum, or rather a purring sound, the hive must be rejected, for the bees are weak.—*Wrighton on the Management of Bees.*

For the Farmers' Cabinet.

On the use of Mules.

Messrs. Editors,—The advocates for the use of mules are about to do disservice to their cause, and play the game of *multicaulus* again, to their manifest injustice. That they are most valuable animals for many purposes, none who have been accustomed to them will deny; but that they should be seriously recommended for the use of the gentleman's carriage, is about as preposterous as to make pies of the leaves of a plant now so universally held in contempt, and for no defect of its own, as it has done more than its judicious friends ever promised for it. I believe that to substitute four mules for horses, on a farm where two or three of the latter are kept, would be found very convenient and profitable; for, while in heavy ploughing, the whole number might be used to great advantage, three would be found more powerful than many a pair of horses on a less tenacious soil, when the spare beast could be made to perform divers other services, such as hoe-harrowing, for which the mule is peculiarly well suited; in a cart made small and light for the purpose; with a light harrow, and indeed in many other ways, by which the team of three might be kept at the plough: while the whole number in a light and broad-wheeled wagon, is the most perfect team that can be imagined. The food necessary for a good pair of horses would be sufficient, with a little additional coarse feed, for four mules; while their strength, agility, and lasting qualities, would be far greater on a farm, than that of a pair of horses under any circumstances, and quite equal, in some, pair for pair—a circumstance of very great importance in the despatch of business.

During the last year I have had my attention drawn very forcibly to this subject, by witnessing the services performed on a large estate in Delaware, a late purchase of Dr. Noble, of Philadelphia, by a set of four mules of superior strength and agility; they have been mainly engaged hauling marl from a pit about two miles distant, and the loads which these animals walk away with four times a day, is a caution to many of us, who boast of a good team of horses. I often meet them on the road, cheerful as larks, sleek as moles, and handy and nearly as intelligent as human beings: never sick, never sorry, but *up* to everything, even if it be a little mischief at leisure times—such, for instance, as eating up their mangers, or gnawing a hole in the sides of their stalls, when nothing better to do, but always most happy when usefully employed; and as proof of this, when the two shaft animals are let out of their stalls to water on a sunday morning, they will walk away and put themselves in their places at their own wagon, which they know from others, and stand ready for action, although without harness. The mule is proverbial for uninterrupted health for a great length of time, some say for forty years; and while the horse is in many situations a delicate and costly animal, requiring extra food, attention and warm shelter when at extra work, the mule takes all as it comes; is always ready and willing, and with kind and gentle treatment, as tractable as the horse, with far more sagacity and spirit. I remember, some time ago, seeing a fine mule on the farm of Mr. Thomas Redman, at Haddonfield, drawing the cultivator between rows of high corn, and no horse could have done it in the style that he performed it; gliding between the crop, touching on neither side, and walking about four miles an hour, his small feet making scarcely an impression on the land, and turning at the ends of the rows in about half the space required for a horse.

At the farm of Dr. Noble, I have lately witnessed a triumph of the Prouty plough, that I could but think you would have been happy to see, as I find that to you the people of this part of the country are indebted for its first introduction. In the hands of the doctor's tenant, Mr. James Bones, it was making such work as astonished us "natives." To be sure, he had a *noble* pair of horses, and he, himself, is one of nature's noblemen; but the way in which he turned up and over a clover sod, with a crop on it about so high as the knee, was by no means slow, which you will believe, when I say I was informed that with a single pair of horses, he had ploughed two acres and a half a day! I call this a triumph, for it ought to be known that Mr. Bones had at first a strong prejudice against the Prouty, or centre draught plough, being in favour of the Miles plough, which he had used for seventeen years, and become perfect in the management of it; but so soon as he had witnessed the superior manner in which this plough cultivates the soil, he had strength of *mind* to change his opinion, and strength of *body* to execute his purpose, in a way which scarcely any one else can imitate. Let me add, to Mr. Bones we are indebted for a fair and satisfactory trial of the Prouty subsoil-plough in the cultivation of corn, in which he left two lands unstirred in the subsoil to see the difference; and there the difference is indeed so great, that it has been said a blind man can perceive it, by the touch; it is so much taller and stouter on the parts that have been subsoiled—but this is digression.

I am, therefore, in favour of the adoption of mules for farming purposes, and believe that their introduction would, in a great measure, supercede the use of oxen; as many of the advantages promised in the use of the latter, would be found in a mule team, with others, far outweighing; their use in hot weather, for instance, and their convenience and adaptation for all kinds of work to which the horse can be applied; about as easily kept as the ox, and much less liable to accident and sickness than either, with an agility and perseverance in some kinds of labour which would outstrip both—which is quite sufficient, without making *carriage horses of them!* but ours is, indeed, a *go ahead country.* J. J.

Middletown, August 26th, 1842.

Scab in Sheep.

Appearances and symptoms.—The first indications of the scab manifests itself by the starting of fibres and locks of wool from the rest of the fleece. It generally begins on the rump of the animal, and extends up the back and over the sides and neck. The animal is seen rubbing and biting its sides, and exhibits signs of great itching and uneasiness. On examination the wool is found to separate easily from the skin, and there is a red appearance of the skin; small watery pimples, or tetters, at first show themselves, and finally dry scabs, or a scurf covers the infected place. The skin has a dry, stiff, meagre feel, and it appears to be hardened in lumps or ridges. In severe cases there is a yellowish water below the crust or scab. In time, the wool falls off from the whole diseased surface, and the flock presents a miserable and disgusting appearance.

Causes.—The causes of the scab are various; exposure to cold rains, and remaining in low, damp, foggy situations too long, carelessness of the shepherd in attending to the cleanliness and comfort of the flock. Unwholesome food may also bring it on. It is contagious, and easily communicated from one sheep to another, in the same manner as the itch is communicated among the human species. Hence some have considered the disease itself to consist in small animalculæ, which burrow in the skin. This may very probably be the case.

Treatment.—On the first appearance of the scab, or itch, separate carefully those that are infected from those that are not. Having done this, you may then shear the wool, if it be not already off, from the diseased parts of the sheep. Wash the parts affected with warm soap suds, and rub it briskly with a brush. Then apply some one or more of the following ointments, either of which will probably effect a cure. An ointment made of equal parts of lard and sulphur, in which is put a small portion of spirits of turpentine. A strong decoction of tobacco has proved a valuable remedy in this disorder, especially in the first stages of it.

A decoction of the green hellebore, or as some call it, swamp poke, or Indian poke, (the *Veratrum viride* of botanists,) united with tobacco, has been found very effectual. The mercurial ointment has also been applied with success.

From the success which attends a solution of chloride of lime, in the cure of the itch in the human system, we should be inclined to think that its use in this disorder among sheep, would be in the highest degree beneficial. It is at any rate worth a trial.

Whatever is applied, however, should be applied promptly and thoroughly. It will not answer to do this business by the halves, unless you wish to be always anointing and washing your flock. A small patch left untouched, will continue the disease and prolong your labour and trouble. Examine your flock often and closely. Do not trust to general appearances, for a sheep may have this disorder for years, and yet if it be naturally of a hardy and strong constitution, eat and drink, and appear as well as any other.—*Maine Farmer.*

Agriculture in former times.

The profession of agriculture in times past, was not held in high estimation; the the position of the farmer being that of the humble and contented labourer, his qualifications being industry and sobriety.—Education and research were deemed unnecessary, and consequently unknown; his path was the path of his predecessor, well beaten and easily travelled. But no where do we discover so clearly the characteristics of a people, as in the customs and duties of their women—no where do we see the station of the *man* more plainly, than in the bearing of his help-mate—now, apply this principle in the present instance, and the farmer's true position will require no further illustration, for we are told by Sir A. Fitzherbert, that it was the "wife's occupation to winnow all corn, to make malt, to wash and wring, to make hay, to sheave corn, and in time of need, to help her husband to fill the muck-wain, or dung cart, to drive the plough, to load grain, hay, and such like," &c. Hannam.

For the Farmers' Cabinet.

"Sandy Point," No. 2.

In the August Number of your paper, I hastily swept over a couple of letters from A. Nicol, in which he gives quite an interesting account of the agricultural operations, on a considerable estate at "Sandy Point," Virginia. In this article, with the editors' permission, I mean in much the same way, to note some of the statements made by the same gentleman in subsequent letters, found in the Farmers' Register.

Under date of "July 10th, 1841," he speaks favourably of clover, having been for the last ten years "extensively and successfully cultivated, and returned to the soil as a manuring:" and says, that "considerable attention has been paid to the collection of putrescent manures;" but owing to the mode of application, the results have been but little satisfactory. The manure made in the winter, consisting chiefly of "entire cornstalks," straw, &c., was applied in the spring to the corn crop, which appears to have been very little benefited by it;—and moreover, from its coarse texture, it formed a serious impediment in the after cultivation of the corn. The following wheat crop, it is said, derived as little benefit from this dry and unprepared material, as did the corn. And the writer thinks a more judicious application of manure, in this condition,—if manure it may be called,—can hardly be made, than by spreading it early over the clover grounds. He thinks, as all others do, who give themselves time to think on the subject, that the mode we sometimes see practised, of piling up manure, subjected to the influence of the hot summer's sun and drying winds, is only calculated to destroy its value. It becomes mouldy, dry, and without strength. Where manure, by the way, is kept through the summer, if it cannot be put under shelter, it should either be well covered with earth, or straw, as it lays in the yard—or heaped up with ditch banks, muck from ponds, earth from along the fences, &c. &c., well mixed in with it. This would prevent its strength being wasted by too much fermentation. What a privilege many of our farmers in Jersey, Delaware, &c., who are adjacent to the marl regions, might avail themselves of, by mixing with their manure, this invaluable article!

In 1840, more than 4,400 cart loads of manure were hauled from the yards—much of it, having been as above mentioned, piled up, was found mouldy and dry, and was of course, but little beneficial to corn or wheat. Better than 3,000 loads of the unrotted and recent manure were put on clover grounds that were intended either for wheat fallow in the fall, or to be ploughed under for corn in 1841. Previously to 1831, very little lime had been used on the estate; but from that period to the beginning of 1840, about 3,000 hogsheads of shells were used, covering upwards of 500 acres, at a rate, varying from 90 to 120 bushels per acre. It appears mostly to have been used on the grounds planted with corn, and the results, as mentioned in my first communication, were decidedly beneficial—doubling the corn crop, and trebling those of wheat and clover. Marl, too, brought from the opposite side of the river, in Surry county, was experimented on, with flattering promises of advantage. In 1840, large purchases of calcareous matter were made. More than 2,000 hogsheads of oyster shells, costing from 75 to 90 cents each; and 4,000 bushels of marl, from Surry, at 4 cents, were contracted for, though only one half the marl was delivered that year. The lime and marl delivered in 1840, cost two thousand three hundred and eleven dollars and forty cents;—about 130 bushels of the marl were put to the acre. This appears but a slight dressing, but it is highly impregnated with lime, and will, in all probability, supercede the use of this latter article. The shell lime is very expensive, compared with marl, which is of easy access, and may be obtained for three cents per bushel.

In a letter dated October 3d, 1841, the writer proceeds to give a few memoranda, connected with the wheat crop sown in the preceding autumn, and which had then but recently been threshed. Upwards of 400 acres of clover and weed fallow, were ploughed and well harrowed between the 24th of July and the 20th of September. Thirty-six acres of oat fallow, in addition to the above, were also prepared for the reception of seed for this important crop. The dry weather and hope of rain, delayed the sowing operations some days. These, however, were commenced on "corn ground," the 10th of October, and all was completed on the 9th of November. It would have been a gratification to know how many acres of "corn ground," were sown; but this we are not told. Nevertheless, we learn, that on the clover and weed fallow, were sown 380 bushels of "mountain purple straw" wheat, and 315 bushels of "white turkey." On the oat fallow, were sown 34 bushels of the purple straw wheat, and 42 bushels of white turkey. On the corn ground, 192 bushels of purple, and 281 bushels of white turkey were sown: the whole quantity sown then, was 1,244 bushels. All this seed was previously washed, the light grains skimmed off, and then rolled in lime. Nearly all was ploughed in with "two-horse mould-board ploughs," and these were followed by heavy harrows, as often as the nature of the ground required. Sixteen two horse ploughs, with seven harrows, having three yoke of oxen to each, were employed during the whole time of seeding; and this occupied twenty-four and a half days, averaging 51½ bushels of wheat put in per day. The wheat vegetated freely, and presented a beautiful and regular appearance. Its progress was of course watched with much interest; and at the "end of March, the general appearance of the crop was very promising." On the 3d of May, however, the Hessian fly made its appearance on most of the wheat sown on the corn ground; and by the 10th, it was found generally over the whole crop. Notwithstanding the appearance of this enemy, it improved rapidly, and by the 17th presented a pleasing and gratifying appearance, giving promise of a profitable and remunerating crop. Several who saw it about this time, estimated that the yield would not fall below an average of ten bushels for one sown. On the 24th of June, twenty-seven cradles were put in motion, with the necessary gleaners, and sufficient hands for shocking. From this time, during the harvest, frequent showers occurred, and the weather was "warm, damp and cloudy," and the "rust" made its appearance in several portions of the crop. From twenty-seven to forty-two cradles, assisted to some trifling extent, by Hussey's reaping machine, continued to operate till the 5th of July, when all was cut and shocked up, presenting 2,501 shocks, judged to average from 4 to 4½ bushels each. Threshing commenced on the 21st of the same month, and the rains having very considerably hindered this work, it was not completed till the 21st of August. Two machines were employed. During this time, the extent to which the rust had prevailed, was alarmingly exhibited. "Every portion of the barns and the labourers employed, presented the appearance of having been heavily powdered with red lead; and where it was left to accumulate undisturbed, it could have been taken up in handfuls, frequently causing sickness and vomiting among the labourers." The results of the threshing were not such as they promised to be, previously to the cutting. Instead of the 10 or 12,000 bushels hoped for, the yield was about 6,600. Nearly 5,000 bushels were sold, and 1,600 bushels preserved for seed. In the opinion of A. Nicol, the rust was almost the sole cause of the falling off of the crop: he thinks the injury from the fly was very limited. The purple straw wheat weighed the best, and proved the most productive; it weighed from 58 to 61½: the white turkey weighed from 56½ to 58½; and 600 bushels of it were saved for seed, and 1000 of the purple.

Now, up in these "diggins," it would require several of our pretty staunch farmers to furnish *seed* for this "Sandy Point" concern: and yet I strongly suspect that many of our farmers here—I mean in the vicinity of Philadelphia,—have more land under their care than they can do justice to, or make profitable.

To myself it has been interesting to follow the operations on this estate; and I hope the brief abstract I have made, may not be tedious to the readers of the Cabinet.

Z. Y.

"Dear Wife."

I hasten from the cares of day,
With weary heart and sad;
Sure at my welcome door to meet
A smile to make it glad:
A smile to make it glad, dear wife,
A tone to lull to rest;
What wonder, like a drooping bird,
I seek my sheltering nest!

I hasten from the gayest scene
To greet a home so dear;
Sure, when the dull delight is past,
To find my pleasure here:
To find my pleasure here, dear wife,
Too happy in the choice,
To barter splendour for thine eyes,
And music for thy voice.

I hasten from the death of friends,
A prey to sorest grief;
Sure in thy kind consoling arms
To find my best relief:
To find my best relief, dear wife,
Where every wound I cure—
Where, beggar'd of all other love,
I could not yet be poor.

I waken when my restless frame,
Subdued by sickness, lies;
Sure, bending o'er my helpless head,
To meet thy faithful eyes;
To meet thy faithful eyes, dear wife,
Though dim with watching me—
Smiling to hide the weariness
'Twould pain my heart to see.

I quicken as I think of thee,
When journeying far I roam;
Sure, at thy prayer, a heavenly hand
Will guide me safely home;
Will guide me safely home, dear wife,
To little ones and thee,
Eager with mother's pride to show
Their newest tricks to me.

I hide within thy breast my shame
At passion's wayward will,
Sure, in that pure confessional
To find forgiveness still:
To find forgiveness still, dear wife,
All generous as thou art:
I cannot pay thee as I would—
Heav'n bless thy gentle heart!

Selected.

The Grape.

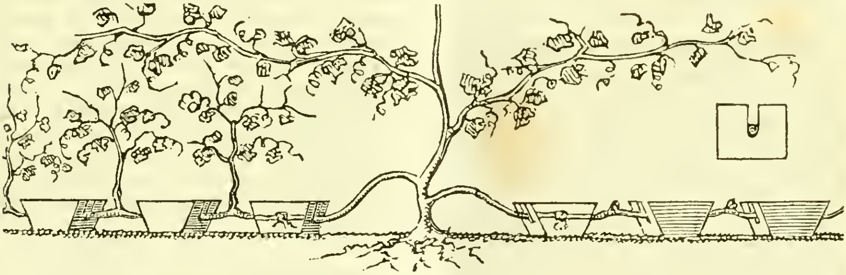
Editors of the Farmers' Cabinet,—Should the accompanying essay be deemed appropriate, and worthy of a place in the columns of your useful Journal, let it be considered as placed at your disposal.

There is perhaps no fruit-plant in our country, so little appreciated in proportion to its value, or the ease and facility with which it may be propagated, as the Grape Vine.—Thousands of bushels of wholesome and most delicious fruit, might be produced every season, even in our cities, especially those within the Middle, Southern, and Western States, were each householder who possesses a small strip of ground, even 2 or 3 feet in width, by 5 or 6 in length, to devote a small share of attention to this highly interesting subject.

There are few plants that yield so abundant a product, for the space occupied on the ground, or the labour required in their culture, as the one under consideration. It is, moreover, when reasonably attended to, quite an ornament, not only to the ample rear grounds of the opulent, but also to the scanty space usually allotted to the dwellings of the humblest of our citizens; and while kept in a thrifty growing condition, its tendency is not only to shade and cool the ground, but to purify the atmosphere, by absorbing a large portion of the noxious vapours which usually abound in densely populated districts, during the warm season.

There is, however, one circumstance which has hitherto tended to discourage the attempt to cultivate the Grape, and that is, the uncertainty of success in propagating it from *slips laid down* in the usual way, and of *removing* them. The writer has, by some experiments carefully made, and most successfully carried out, ascertained that the seeming difficulty alluded to, may be readily overcome; and that by a process perfectly simple in itself, and attended with but very little trouble. From one healthy vine, 20 to 30 plants may be propagated in one season, with both roots and branches sufficiently grown for removal to any distance, and for transplanting in a condition to produce a liberal crop of perfect fruit, within five or six months from the time of being *set out*.

The following sketch will probably convey an idea of this simple though beautiful process:



About the middle of the Fourth month, take of a thrifty bearing vine, 2 or 3, of what are termed *runners*, of the last year's growth, in a healthy condition, and of sufficient length, say 10 or 12 feet each, to furnish the requisite number of buds, say 20 or 30 each; place in a light wooden box, about 8 inches square, every alternate bud, leaving the next, between two boxes, *outside* in the *open air*, for a *plant*. Cut off the bud that is within the box, and intended for roots, with a sharp knife, transversely, near to the vine.

Let the boxes be made sufficiently strong to bear removal when wanted for transplanting, but with such openings in their sides and bottom, as will admit of the *roots passing out*, which they will do for a yard or more in length, into the beds, in pursuit of nutriment.

Instead of boring holes in the sides of the box, it is better to have a small slip cut out from the upper edges,* to admit of laying the vine carefully in *from the top*, and so avoid bruising it, or in the least disturbing the outside bud, intended for throwing up a plant. The boxes being adjusted at such distances asunder, as to enclose one good bud each, and leaving another outside for a *branch*; sink them about three inches deep in good ground; then lay the vine carefully in, place it about the middle of the box, having the outside eye or bud one inch above the surface of the ground, in the bed; then fill the boxes with a good rich mould, always avoiding clay.

The concern thus adjusted, every healthy outside bud will throw up a plant, that will in an ordinary season, grow from 8 to 12 feet in height, which may be removed in the boxes in the spring of the year, to any reasonable distance, and transplanted as beforementioned, in a condition for immediate bearing. The roots which may have extended outside of the box, should be secured from injury by a wrapper of matting or straw on removal. It may be well to observe, that after the young plant shall have grown to 8 or 10 feet in length, it is best to check its further projection, by nipping off the bud at the extreme end. It will also be found, that fruit will *set* on many of the young plants, in a few weeks after *laying down*, which, if left alone, will mature and ripen in good condition the first season. But, such premature bearing should always be checked, by taking off the young buds as soon as they are set. And, in all well cultivated vines, the lateral shoots, or what are by some called suckers, should be (the greater part of them,) removed as fast as they appear. The obvious tendency of these several prunings, will always be to throw the whole nourishment derived through the medium of the roots and leaves, from the soil, the atmosphere and moisture, into the main body of the plant, and thereby render it strong, healthy and prolific. N.

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* See the detached figure in the cut.

Philadelphia, Ninth mo. 16, 1842.

Lime, and the mode of applying it.

The practice inculcated in the following, which we clip from the "American Farmer," has novelty at least, to recommend it: we trust our friends will give it the attention it deserves. That lime is one of the most valuable farm manures, has been long settled: the best mode of applying it, is not so well understood.

Mr. Raymond Baker communicated some observations on the use and abuse of lime as a dressing for land, by Mr. William Henry Fisher, at 18 Conduit street, London. The author's great object is to impress upon farmers the importance of using quick lime, and not lime which once had been quick, but by decay in use and exposure to the atmosphere had become effete, and has absorbed from the air the carbonic acid, which changes it again to the carbonate of lime it was before burning. He considers that many thousands of pounds are annually thrown away by agriculturists, from want of a proper knowledge of this simple fact; and he recommends them to use their lime in the fresh burnt state, by carting it direct from the kiln upon their land, spreading it in the lump, and in that state ploughing it in directly, the sooner it being got from the kiln into the land the better. The author concludes his communication with the following remarks:—"The lime will be found, if properly burnt, on a second ploughing, to be crumbled to pieces or powder, and on harrowing will be intimately mixed with the soil. From the heat evolved during the slacking of the lime underground, and its causticity, which diffuses itself by the agency of the moisture it meets with through the soil, it will be found to destroy, or at any rate to be extremely obnoxious to wireworms, slugs, grubs, and other enemies which the farmer has to contend with, and which are very frequently the cause of failure in his crops, as well as to render most vegetable matter in the soil soluble, and food for future crops. These are the properties that *lime* has in contradistinction to *chalk*; the latter, no doubt, is a very useful addition to make soils, but do not go to the great expense of buying or burning lime, and then allow it to be converted again into chalk, or carbonate of lime, before you plough it into your land. In some districts the lime-stone is burnt in large lumps, particularly where wood is employed as a fuel—in which case it should be broken to about the size of a small penny roll before it is ploughed in. In some cases it may be said, that owing to the distance of procuring lime, enough cannot be brought at one time for a ploughing; all I can say is, plough it in as soon as possible. If the turnip-fly is generated in the soil, lime, applied in the manner I have directed, would, no doubt, do much towards its extermination; and the same effect and result would hold good in respect to the black caterpillar. In conclusion, the good effects of applying lime in the manner recommended, I have myself experienced, and have received ample testimony to the like purport from extensive agriculturists, who, at my suggestion, have adopted the plan."

Royal Agricultural Society.

New mode of making Bricks.

Messrs. Smith & Proud, of Baltimore, have an establishment for making bricks which very far exceeds that of Birmingham, England. By pressure, of, we believe, about twenty tons weight, the clay as it is taken from the bank, without the trouble either of drying or grinding, is converted into bricks ready for the kiln. During a visit to their establishment recently, we accompanied the carts to the bank, saw them loaded, and in five minutes from the time that the clay was shovelled into the carts, we saw it converted into the brick form and placed in the kiln ready for burning. From the extreme degree of pressure to which the clay is subjected, the bricks are more compact and fully a pound heavier than those made in the usual way, and, as we learn, are perfectly impervious to the effects of the weather.

American Farmer.

For the Farmers' Cabinet.

Cursory Observations on the Animal Races.

It is curious and interesting to observe, in what manner the various races of animated nature are adapted to the situations in which they are placed; and how their powers and propensities are adjusted to the spheres in which they are designed to move. When Noah was preparing to take possession of the ark, and was collecting the animals which were to occupy the post-diluvian world, he was directed to take at least one pair of every kind. With the antipathy which many of our race entertain towards some particular animals, we may suppose that if they had been employed to make the collection, they would have inclined to leave the objects of their aversion, to perish in the flood. But what Infinite Wisdom created, the same Wisdom saw proper to preserve. Yet it appears that by the time the third generation after the flood, entered upon the stage, the wild beasts had increased to such a degree as to interfere with the conveniences of man; for we find Nimrod became a mighty hunter before the Lord.

It may be asked, why did Infinite Wisdom create beasts of prey, to destroy the weak and defenceless animals, and even to glut their hunger with the mangled carcases of men? Why, we may ask in return, did he form a bird with an appetite to feed on an insect or a worm? A little reflection will satisfy us that the order of creation, by which the larger and stronger animals feed on those of inferior strength, ensures a much greater amount of life, than if they had all derived their support immediately from the vegetable world.

We may also observe, that if the earth had been stocked with graminivorous animals only, they would have been liable to increase to such a degree, as to suffer much more from famine, than they ever do from the teeth or claws of beasts or birds of prey. By the instincts and appetites which cause such numerous tribes to feed on each other, the numbers of each are kept within their appropriate limits, and prevented from interfering very much with each other. It is a remarkable circumstance, that the larger animals, particularly the carnivorous ones, increase much more slowly than the smaller kinds. If the lion multiplied his race with the rapidity of the rabbit or the mouse, the forests would abound with lions, which must devour each other or starve. A few lions are sufficient to prevent an extensive forest from being overrun with animals on which he feeds. The carnivorous animals which feed on smaller prey, multiply more rapidly than lions, yet their powers of multiplication appear adjusted to the natural increase of those that support them.

My agricultural reader may perhaps inquire, what connection there is between these speculations and the object of the Farmers' Cabinet? Come with me a little further, and we shall see.

When the forests are cleared, and the ground brought under culture, the larger beasts of prey are expelled or destroyed. The gun or the bow performs the service which nature assigns to their teeth and nails. Yet we find it advisable to retain some of the smaller beasts of prey, to keep down the races which interfere with us. The dog and cat are properly beasts of prey, and probably no person of sober understanding, would be willing to see either of these races expunged from creation. The judicious farmer would not agree to clear the creation of cats or dogs; yet he would desire to limit their number within reasonable bounds.

But are there not other creatures, not so completely domesticated as cats and dogs, which we ought to be careful to preserve from extinction? We know that the various tribes of the feathered race, generally feed either on worms and insects, or on other races of living creatures. The little hawk and screech owl, are known to feed on mice; and most of those which inhabit our fields and woods, devour insects or worms. It is true, that some of them eat a little of our fruit and grain; but if they keep down the races of insects and worms that injure or destroy our crops in their nascent state, they probably more than pay for what they consume.

Now we know how to prevent the larger animals from increasing very much on our hands, and therefore do not require assistance of lions and tigers to thin our fields; yet we do not know how to prevent our crops from being injured by creatures, which are too small, and too numerous to be kept down by the gun or bow. Of course we ought to use the means, or rather we ought to be careful not to destroy the instruments, which a beneficent Creator has furnished, for effecting what our own arts or industry cannot accomplish.

It is a well-known practice with idle men and boys to go about the fields, often against the will of the owners, shooting whatever bird they can see. And this is done, not so much for the purpose of feeding on the game, as for the diversion which it affords. Upon this we may exclaim with the poet—

> "Detested sport, that owes its pleasures to another's
> pains."

And that is not all; it is disturbing the order of creation; it is reducing the profits of the farmer, by destroying the guardians of his crops.

Now, let me suggest to my fellow-professors of the plough, whether times and circumstances do not demand a general and simultaneous effort to arrest this destructive practice, in all the well settled parts of our country.

In Pennsylvania, the penalty for hunting on the enclosed land of another, without license from the owner, is forty shillings, $5.33. If farmers would unite in cautioning all sportsmen against this violation of the law, and in exacting the penalty in case the caution was disregarded, we might reasonably hope to see, in a few years, the feathered race replenishing their ranks, cheering us with their melody, and guarding our rising crops from the depredation of worms and insects. An Old Farmer.

From Trans. N. Y. State Ag. Society.

Wine from Grapes.

One word on making wine from grapes of northern growth. None of our grapes, after undergoing the process of scalding in lye, and properly exposing them to the desiccating course laid down in the books, or by any other method as yet suggested, will produce the *raisin*, or any thing approaching to it; they dry up into a flat shapeless form, consisting of skin and seeds, with a slightly sour and tasteless flavour, which it would be impossible to recognize as the fruit of the vine. Our climate is not genial enough to perfect the saccharine formations in quantity and perfection, sufficient to make it a strong fermentable article, and which is more fatal still, is the fact, that they do not contain the tartaric acid in any notable degree, or not in sufficient intensity to decompose the saccharine matter, and produce the liquid known to amateurs as *wine*. The malic acid seems to predominate, as in the currant, gooseberry and apple, and the juice of our grapes, when fermented, is but *cider*, with a little of the essential oil peculiar to the grape, sufficient to slightly alter its flavour. Even with the tartaric acid and the saccharine added, till its hydromatic weight equals the *must* of foreign production, still, disguise it as you will, the result is cider—a fine, strong, peculiar flavoured cider; and none of all the kinds yet produced in America, could for one instant impose upon a mere tyro in wine-tasting. I have drunk of most of the samples produced in this country. The Vevay—the North-Carolina Scuppernongs, and of eight varieties produced by the celebrated major Adlum of Georgetown, D. C., some of which was a fine palatable liquor; but the most of all that I have seen, were inferior to the weak clarets of Bordeaux, or the red wines of the Rhine; in which opinion I am confirmed by every one within my acquaintance, who has investigated the subject. Whoever, therefore, makes an outlay to form a vineyard, with the intention of making wines, will be wofully disappointed, and the attempts will result in a total failure.

If the monster *intemperance* is, by the exertions of the humane, and the force of public opinion, to be bound hand and foot, and cast into the abyss of annihilation and forgetfulness, it is a wise provision of the God of nature, that one great source of that seductive and prevailing evil, should be wanting in the productions of our free and happy land. L. B. Langworthy.

Lime and Ashes.

The "American Farmer" says, that the means most freely used by a farmer in Maryland, in the system which has communicated to a poor and exhausted estate, life and activity and productiveness, great crops of corn and wheat, root crops, fat hogs and cattle, a good garden, vines and fruit trees bending under their heavy burdens, has been the free use of *oyster-shell lime!* He commenced, as others have done, with *ashes;* and found them to *pay well;* but after trial and comparison of out-lay and results, he found *lime* to be, in the "long run," the most economical. The race between them was something like that between the hare and the tortoise—the ashes got the start of the lime a long way; but the lime, like the tortoise, made up in *lastingness*, for want of quickness at the jump; and finally he has in a great measure given up the use of ashes for that of lime. On one lot of stiff white oak land, which would not have yielded as much per acre, as the team consumed while ploughing it, there was a luxuriant crop of Indian corn growing, after a good crop of wheat last year, with no help but 100 bushels of oyster-shell lime to the acre; spread in autumn before the land was fallowed for wheat.

It would seem, however, that this same farmer has no great reason to find fault with *ashes;* for a single lot of five acres of land, which cost him $20 an acre, and on which $20 an acre of ashes had been spread, and which when he took it in hand, would not have yielded a bushel to the acre, had paid him back his $20 purchase money, his $20 for ashes, and both of them three times over.

For the Farmers' Cabinet.

To Cure Hams, &c.

In a late number of the Public Ledger, a writer who signs himself S. S., complains much and justly, of the "imperfect manner in which pork, bacon and lard are generally prepared for market, by those who make it a business in the west." And certainly he might with great propriety, have included *butter* in his catalogue, as is shown by your correspondent, "Sarah F.," in No. 1, page 20, vol. 7, of the Cabinet. It is a fact, that first-rate hams—good Jersey hams, for instance, will command in this market, from 30 to 50 per cent. more than those cured in the west. Now, need this be the case? Where hogs are fatted entirely upon the *mast* of the woods, or at the distilleries, I believe the pork is not equal to that fatted upon corn. But the great grain growing districts of the Mississippi are also prolific in hogs, which I suppose are fatted like our own, upon that delight of the *grunter*, Indian corn. Why then should the article be inferior to our own? Some years ago, it was common among the pork dealers, whom we are now finding fault with, to cure all parts of the hog, alike—hams, shoulders and sides, all with one process, packing them promiscuously in one cask. But I believe they now bestow more care upon the hams. They are, however, still an inferior article, and of course bring an inferior price. On a late occasion, when a large amount of military stores was needed by the British government, for their troops in India, it was intended to procure American salted provisions—but on examination, it was found that they were so inferior in quality, and so badly put up, that they would not at all answer. And you will remember, as well as myself, to have seen it stated, sometime ago, a year or more, perhaps,—that a considerable amount of wretched stuff, shipped from this country for *butter*, was sold in the London market for common *grease*, it being entirely unsuitable for the table!

The writer, S. S., above alluded to, gives the following directions for curing hams, shoulders, rounds of beef, tongues, &c., for drying, which he says he has followed successfully for twenty years, and that hams thus cured, were sold this last spring for 11 cents per lb. to sell again; when, as we all know, thousands were bought of the grocers for 6¼ cents. Now, with this difference in price, between a *good* and an indifferent article, is it not well worth while for all engaged in its preparation, to secure to themselves, by their care and skill, a good remunerating price, and leave the *half priced* article to be furnished by the careless, the unskilful, and the unthrifty? The directions are as follow: H. M.

"To one gallon of water, add eight pounds coarse rock salt, one pint of molasses, and two ounces saltpetre (nitre), mix the ingredients in these proportions well together, and let them remain until dissolved, say twelve hours, and then assort your hams so as to have them of the same or similar sizes in the same tubs, packing them *either end downwards*, but not flat or horizontally, until the cask is full—then pour the brine, as above prepared, over them, and your work is about done. Hams of about ten pounds weight should remain in this pickle about four weeks, and larger ones in proportion, and *no longer*—(six weeks in common being quite long enough for pretty large hams)—or they will become too salt, a great fault indeed for this article. All the various laborious and tedious methods we hear of, such as dry rubbing with saltpetre, sugar, and so forth, may be very good indeed, but *quite unnecessary*, inasmuch as precisely the same end is attained by the above process, with comparatively little trouble. After the hams have lain a sufficient time in pickle, take them out and let them drain for a day or two, before hanging them up to smoke—for which purpose hickory wood is much the best; and when brought to a proper colour, they may be packed in casks of any size, in *dry* saw-dust, in medium coarse salt, (as they will take no more salt,) or any compact article—or they may be packed without any thing, if not intended for export; in which case it is better to interlay them with something to keep them solid and compact, and to keep out flies.

The above recipe is unsurpassed for curing rounds of beef, beef tongues, &c., for drying; but they must not remain in the pickle more than *ten days;* then to be taken out, washed, and hung up to dry. I do not profess to be acquainted with the best mode of putting up beef for shipping. But pork seems simple enough—cleanliness, despatch and plenty of salt, are the principal requisites. By despatch I mean, that the meat should not be suffered to remain unpacked so long as to become partially tainted before being salted. It is thought by some, that it is sometimes left to lay too long in bulk before salting, which accounts for so much unsaleable meat received from the interior. To obviate all this, let the pork remain as short a time as convenient after becoming perfectly cool, before it is cut up into proper sizes, and begin to pack in *sweet* casks, by first putting in the bottom, salt to the depth of two inches; then begin to put down a layer of pork, in a circular form round next the staves, with the skin next the wood, and so on filling up the middle last, until you have a solid mass of meat six or eight inches deep, then throw a sufficient quantity of salt to fill all the interstices, and to cover them partially; after which take a wooden rammer and ram the meat down for some time; it would be well to place a piece of carpet on the meat before commencing this process; after which, put in as much more salt as will cover the layer about 2½ inches in depth, and then lay on another layer of pork and proceed as before, by alternating the layers of the salt and pork until the cask or tub is full, letting some 2½ or 3 inches of salt remain on the top—(but in no case use any other than the *best rock salt,*)—then let the meat stand thus for a week or ten days, after which pour in as much *pure clean water* as will nearly fill the cask; and if well hooped and headed it may be sent to Calcutta and back again, and be as good on its return as it ever was. S. S."

It is with every thing else that is brought to market, as our correspondent H. M. observes in relation to Hams, &c., the *good* article is of ready sale, and commands a fair price; while the inferior, if it sell at all, it must be at a price, scarcely paying for the preparation and bringing it to market. This is a subject of very great importance to the producer, and the judicious remarks of H. M. we trust will have their use.

In the Cabinet of Seventh month 1841, p. 373, may be found two recipes, which we think also good for curing Hams, &c.—one purporting to be the Jersey method—and the other was given by our friend Botts of the "Southern Planter," published at Richmond, Va. —Ed.

Lard Oil.

Analysis.—The following extract is from an article in the Louisville Journal on the discovery and effects of Lard Oil:—

This great discovery is one of the results of chemical science, and shows, in strong colours, the utility of a high degree of education, for which we have so often contended. M. Arago, the illustrious French philosopher, has forcibly shown, that inventors are the real benefactors of a state; and in proportion as we open the highest departments of science to the mass of the people, in that proportion do we secure new inventions and great discoveries. Let the citizen reflect, then, while enjoying the light of the lard oil, that the saving he effects in purchasing a gallon of it at 50 cents, instead of a gallon of sperm oil at $1,75, is one of the results of science; and let it be an incentive to secure and maintain a comprehensive system of public instruction. This is but a single item, but it alone should cause science to be respected.

Chevruel, a French chemist, in some investigations upon animal fat, discovered that it was composed of two principles, to which he gave the names *elaine* and *stearin*, and he found that they could easily be separated. They are composed of carbon, hydrogen, and oxygen; and wherever carbon predominates in an animal oil, we may be assured of an article capable of a high degree of luminous power. A curious experiment is related by Bernard, which shows that fat may be made artificially: on mixing together one measure of carbonic acid, ten measures carburetted hydrogen, and twenty of hydrogen, and transmitting the mixture through a red hot tube, several white chrystals were obtained, which were insoluble in water, soluble in alcohol, and fusible by heat into an oily fluid.

The following are the relative constituents of lard oil and spermaceti:

	Carbon.	Hydrogen.	Oxygen.
Lard oil,	79.03	11.422	9.548
Spermaceti,	79.05	11.6	8.9

We have heard the fear expressed, that the lard oil will not stand the winter, or will not retain its fluidity in cool weather. This is a very idle fear. Sperm oil is made in the same way as the lard oil. It is composed of elaine and stearin, and they are separated by pressure upon bibulous paper, which retains the elaine. By the same process lard oil is obtained, and winter strained lard oil will stand the cold weather just as well as winter-strained sperm oil. The success of this discovery is secure beyond all chance, and the corn and swine of Kentucky will prove greater sources of wealth to her citizens than would the mines of Potosi.

Saving Seed.—Every attentive observer will remark, among the plants of almost every kind of crop, some individual stalks are distinguished from others by a greater degree of health or luxuriance, or productiveness, or earliness, or some other peculiarity. A friend of mine remarked, some years ago, a particular stem of peas among his earliest crop, which came into flower and ripened long before the others. He marked this stem, and saved the whole of its produce for seed. These came as much earlier as they had originally done. This produce was also saved for seed, and thus he obtained a particular kind of early peas, that came at least a week before the best sort he could buy in the shops, if sown at the same time. The Doctor relates facts similar to this respecting wheat and beans. The general idea he means to inculcate is obvious and worthy attention.—*Dr. Anderson's Recreations.*

For the Farmers' Cabinet.

Rotation of Crops in Bucks County.

In your August Number, I threw together a few observations on the wheat crop of Bucks county; and particularly of the Mediterranean variety, and promised some additional remarks upon the rotation of cropping adopted by its intelligent farmers. That which is now called the American system, probably originated among them, and is continued with but little change to the present time. On this system the green sward is broken up, either in the autumn or spring, but generally the latter, and planted with Indian corn, without disturbing the sod. In the autumn, the corn is either topped, or cut at the ground, and shocked in the field, where it stands till the proper season arrives for it to be husked and housed.

In the following March this ground is deeply ploughed and sown with oats. When the oats are taken off, the manure is hauled upon the stubble, and completely turned under by a pretty deep furrow. In a few weeks, the oats which shattered out while gathering the crop, spring up and soon cover the ground, and about the last week in September, they are ploughed under by a narrow furrow, and the manure and stubble, which have now become perfectly rotten, are completely mixed with the soil, and brought near enough the surface to give the wheat an early start.—The wheat being sown from the 1st to the 10th of October, gives the best chance for a good crop of red chaff-bearded wheat; and when it escapes the fly and rust, perhaps there is none better. At the time the wheat is sown, about half a peck of timothy is also sown, and lightly covered with the second harrowing. In the latter part of March, or beginning of April, from six to eight quarts of clover seed are likewise sown upon every acre of wheat. After the wheat is harvested, the grass is generally sown with plaster, at the rate of about a bushel to the acre; and about the middle of September the stubble is mown, and the hay being well salted, serves the young cattle for their winter provender. The next season the grass is mown for hay, which is principally clover; the second crop is either pastured, or mown for hay, or kept for seed. The ensuing season the grass is likewise cut for hay—the timothy now predominating, and the second crop pastured.

This completes a five years rotation; but where the farm is large, or divided into more than five fields, and the timothy stands well, many farmers continue the grass a third year—either mowing it for hay or keeping it for seed, and in the following spring this ground comes in again with corn.

Now whether a better course than this can be adopted, we will try to examine in your next number. M. B. S.

September 6, 1842.

Will you take a Sheep?

A valuable old farmer, about the time that the Temperance reform was beginning to exert a healthful influence in the country, said to his newly hired man:

"Jonathan, I did not think to mention to you when I hired you, that I think of trying to do my work this year without rum. How much more must I give you to do without?"

"Oh!" said Jonathan, "I don't care much about it—you may give me what you please."

"Well," said the farmer, "I will give you a sheep in the fall, if you will do without."

"Agreed," said Jonathan.

The oldest son then said—

"Father, will you give me a sheep if I will do without rum?"

"Yes, Marshall, you shall have a sheep too if you will do without."

The youngest son, a stripling, then said—"Father, will you give me a sheep if I will do without?"

"Yes, Chandler, you shall have a sheep also, if you will do without rum."

Presently Chandler speaks again—

"Father, hadn't *you* better take a sheep too?"

This was a poser; he hardly thought that he could give up what he had long been accustomed to; but the appeal was from a source not to be easily disregarded. The result was, the rum was henceforth banished from the premises, to the great joy and ultimate happiness of all concerned.—*Selected.*

Espy's Ventilator.

Whether Mr. Espy has found out the laws which regulate storms on a great scale or not, he has hit upon a little matter by which we think he will make the laws of the wind on a small scale serve the public, and fill his pockets. It is that thing so long sought in vain, a remedy for smoky chimneys, and a general ventilator. It consists of nothing but a metallic cone placed on the top of a flue horizontally with a vane to keep the point of the cone to the breeze. The direction which the wind gets by passing over the cone, produces a vacuum at the large end, which is the outlet, and so creates a draft.—The effect is altogether surprising. Some places which were odious with foul air, have been rendered perfectly sweet by this single apparatus, and chimneys which were given over by the doctors as incurable, have been brought to regular action.—*Jour. of Com.*

For the Farmers' Cabinet.

Buckwheat, or Rag-weed?

In a section of country where I reside, it is believed by many, that to take a crop of buckwheat after a crop of grain, is a very exhausting process, and a bad mode of management. I have this day walked over the wheat-field of one of those considerate cultivators, and find the stubble of the former wheat-crop thickly planted with rag-weed, two feet in height, now just coming into bloom. On pulling up one of these weeds, and examining its strong, woody and far-extended roots, I am tempted to *ask*, which of these crops—the rag-weed, or the buckwheat, with its proverbially delicate and tender roots and stocks, is most likely to draw the greatest quantity of nourishment from the soil? and to *answer*, the rag-weed, an hundred fold. It is really amusing to notice persons, who are so careful of their soil as to deprecate the sowing of buckwheat after a winter crop of grain, lest the land might, by such treatment become exhausted; and to see them grow the rag-weed, lamb's-quarter, mullein and other tremendously-exhausting crops, about the height of their fences, under the idea that their land is at rest! and would be injured by raising another crop of artificial growth of any kind. Now the question is not, whether a second crop be exhausting, merely as such—for it is certain that the land will be fully planted with something, and will *not* rest—but, which crop is the most exhausting, a natural, or an artificial or cultivated one? and in the present inquiry, I answer, confidently, the natural crop, which will, assuredly, take full possession of the land and keep it, if no other is sown. But, besides this, I argue, that ploughing down the wheat stubble immediately after harvest, and sowing buckwheat, is comparatively, a renovating process; for it not only rids the land of an exhausting crop of weeds, but makes manure of them and the stubble, to the amount of far more than the nourishment which the crop will draw from the soil; leaving the land clean and fit to be thrown up as a winter fallow, in first-rate order for an early spring crop. And after this, suppose our careful friends were to sell their buckwheat, than which no crop is more easily and cheaply grown and harvested, and faithfully expend the whole money in manure, to be given to this clean fallow in the spring—would they then account the practice *exhausting?* I guess not; but if to save labour and an outlay for seed be their object, they have it, and their reward; but let them cease to talk about their anxiety to save their land, by such short-sighted miserable policy. I repeat,—the question is, not which is the most exhausting process,—a *crop* of buckwheat, or a *rest* for the land? but, which is the most exhausting of the crops, buckwheat or rag-weed? for weeds will fill the soil, unless it be planted with useful crops; but then they will give place, provided the earth is well cultivated and prepared by proper pulverization, and the crop be well tended—on the immutable axiom;

> "If good we plant not, vice will fill the place."

L. W.

Montgomery co., 29th Aug. 1842.

Culture of Wheat.

Plough deep, if for no other reason than to bring the lime to the surface. Lime must be had to produce a good crop of wheat; and if it exist in the sub-soil, as is generally the case in the West, deep ploughing will bring it up.

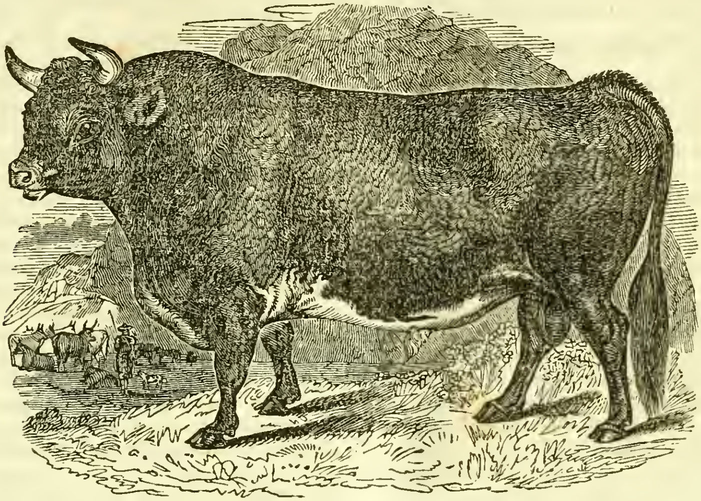
Time of Sowing.—For at least two good and sufficient reasons, early sowing is best on the prairies. The greater growth will afford protection to the roots, so that the soil will not be blown from around them, as is frequently the case, and then left to freeze uncovered. The snow will also be kept from blowing away, thereby preventing early thawing in the spring. The early starting of vegetation in the spring and subsequent freezing, as appears to us, is what is usually called winter-killing—spring-killing we think more proper.

Again, our wheat being so peculiarly liable to rust, it is desirable to have it mature as early in the summer as possible, so as to be out of danger from the hot, damp, murky days so common in mid-summer, and which unquestionably are the cause of rust. For this reason it should be sown as early as possible, and not have the heads so far advanced as to be injured by the frosts of winter. The proper season of sowing will of course vary with the latitude.

Cover with the Plough.—We have never seen a farmer who ploughed in his wheat, who did not say it was much better than harrowing. The chief advantage seems to be, it roots so much deeper, that it is not thrown out by the early spring thaws, and then frozen.

Roll it with a heavy roller immediately after sowing; again late in the fall; and again as soon in the spring as the ground is dry enough so as not to adhere to the roller and pull up the wheat.—*Union Agricul't.*

A tidy man will not suffer the weeds to grow round his house; nor feed his hogs in the high-way.



THE KYLOE, OR WEST HIGHLAND BULL.

THE origin of the term *Kyloe*, is obscure; it has been traced to their crossing the many *ferries*, or Kyloes, which abound in the west of Scotland; but be that as it may, the true Kyloe breed of cattle are, by universal consent, admitted to be superior to all others whatsoever, for prime beef; commanding very readily, two or three cents per pound in Smithfield market, over that of any other fat cattle brought thither. The chief value of the Kyloe, or West Highland cattle, consists in their being hardy and easily fatted; in that they will live, and even thrive on the coarsest pastures; that they will frequently gain from a fourth to a third of their original weight, in six months feeding; that the proportion of offal is not greater than in the most approved larger breeds; that they will lay their flesh and fat equally on the best parts; and that when fat, the beef is fine in the grain, highly and deliciously flavoured, and so well mixed or marbled, that they are ready sale in every market to which they are driven, either at home or abroad.

The following description of the true Kyloe, or West Highland bull, is by Malcolm M'Neil, of the island of Islay, from whence alone, about 4000 of these cattle are annually exported. "He should be black, the head not large, the ears thin, the muzzle fine, and rather turned up; broad in the face, with eyes prominent, and the countenance calm and placid. The horns tapering finely to a point, neither drooping too much nor rising too high; of a waxy colour, and widely set on at the root. The neck fine, particularly where it joins the head, and rising with a gentle curve from the shoulder; the breast wide, and projecting well before the legs; the shoulders broad at the top, and the chine so full, as to leave no hollow behind them; the girth behind the shoulder deep, the back straight, wide and flat; the ribs broad, with the space between them and the hips small; the belly not sinking low in the middle, yet on the whole, not forming the barrel-like carcass which some have described: the thigh, tapering to the hock joint; the bones larger in proportion to the size of the animal, than in the breeds of the southern districts. The tail on a level with the back; the legs short and straight, and the whole carcass covered with a thick, long coat of hair, with plenty of hair about the face and horns, but that hair not curly." The Kyloe is a pure and distinct breed, and has attained its present character and superiority, by the breeders selecting, not from other districts where the size has been increased, but by general consent, from the island of Skye, where the cattle are small, but *suited to the soil and climate;* where they can be most easily raised at the least expense, and when removed to better keep, will thrive with a rapidity almost incredible—a maxim in breeding which ought always to be borne in mind; as extra weight can at all times be attained by extra keep, which is far preferable to extra size of carcass, ill formed, probably, and without any proof on feeding.

For the Farmers' Cabinet.

Mediterranean Wheat.

Six years ago, which was about the time of the general failure of the crops throughout the union, the Mediterranean wheat was first introduced into this section of the country. It was said to possess some good properties and many bad ones,—among the latter, were its short ears, coarse grain and weak straw, which occasioned it always to fall before harvest. In the consideration of most farmers who had not tried it, and of some who had, its bad qualities outweighed the good, and they therefore concluded that the culture of rye would be more safe and profitable, than that of wheat of such an inferior kind. Had they all, in the beginning, given it a fair trial before they passed judgment, the result would, no doubt, have led to a different opinion, and have removed the prejudice they entertained against it.

In every fair experiment which has been made with this wheat, from first to last, it has proved successful, and under circumstances where other kinds, which were considered the best and most hardy, have entirely failed. Let the soil and the season be as they may, it always appears healthy, and is certain proof against most of the accidents to which other wheat is liable. The grain, it is true, appears coarse and of a dark complexion, and it is certainly very large, so much so, as almost to lose its resemblance to its species; but in the quantity and quality of flour from the bushel, it is quite equal to the finest varieties of wheat. In weight it never lacks, but usually overruns from three to five pounds in a bushel; and even this season, when all other wheat falls far below the standard weight, this exceeds it. Notwithstanding its short ears, which have always been regarded as an objection to it, being considered as an indication of a small product in grain, it generally yields about seven bushels to the hundred sheaves, though sometimes less, where it has to struggle against bad farming; yet often more, where it has the advantage of a favourable season and proper cultivation.

This season, on a soil and under circumstances where other wheat yields only from ten to fifteen bushels of inferior grain to the acre, this produces from twenty to thirty, and that of superior quality; and the straw of the latter is perfectly bright and free from rust, while that of the former is blackened by it, and very much injured. On a soil too thin for other wheat, this will grow and prosper. It will resist, effectually, the fly, rust, mildew and smut, and every other obstacle, except bad farming,—it will not grow for a poor farmer, and if in any instance it does fail, it is from this cause alone.

In preparing the ground for this wheat, where the soil is naturally strong and healthy, barn yard manure should not be applied, as it would prove an injury, rather than a benefit, by causing too rank a growth of straw, and occasion it to fall before it is ripe or fit to gather. The land in other respects, should be treated and cultivated as for other wheat, or better if possible. It should be two or three times properly ploughed, and also well harrowed, and be completely pulverized throughout, to the depth of eight or ten inches,—as this wheat delights peculiarly in a deep mellow seed bed, and has an aversion to slovenly and imperfect tillage. To ensure a good crop, it should be sown, in this latitude, at any time between the 1st and 10th of September, but never later. It is for that reason I do not recommend it to lazy farmers, as they would not have their ground in proper order for it so early in the season, and it is never willing to wait for "three white frosts," as sluggish farmers always do, before they sow their wheat. This wheat is generally ripe ten days, or a fortnight sooner than other wheat, and should then be gathered. It should also be stored away as soon as the straw is dry after it is cut, and if possible, before it gets wet, as much moisture will darken the colour of the grain, and also soon cause it to grow in the sheaf. P. W.

Rural Retreat, Northampton co. Pa., Sept. 6, 1842.

To make home happy.—Nature is industrious in adorning her dominions; and man, to whom this beauty is addressed, should feel and obey the lesson. Let him, too, be industrious in adorning his domain—making his home, the dwelling of his wife and children, not only convenient and comfortable, but pleasant. Let him, as far as circumstances will permit, be industrious in surrounding it with pleasant objects—in decorating it, within and without, with things that tend to make it agreeable and attractive. Let industry make home the abode of neatness and order; a place which is enticing to every inmate, and which in absence draws back the heart by the fond associations of comfort and content. Let this be done, and home will become doubly dear. Let parents who would have their children happy, be ambitious to bring them up in the midst of a pleasant, a cheerful, and a happy home. Waste not your time in accumulating wealth for them; but strive rather to plant in their minds the seeds of virtue.—*Selected.*

Improving the Soil.

As a convenient and economical plan of saving manure, we extract the following from a correspondent of the Carolina Planter, as affording many most excellent suggestions, which are strictly applicable in all parts of the country. The practice of gathering and hauling oak leaves and other litter to the cow yard, is certainly good; but we remark, that there are many other kinds of litter, such as corn-stalks, straw, &c., that might be thrown on the barn, cow, or stable yard, and when the cattle are plenty, an immense quantity of manure might be made. But to hear the correspondent speak for himself, we give place. He says: "I have a parallelogram, 150 feet by 50, enclosed by a straight fence, in the midst of which is a low house 96 feet by 24. A part of this is divided off into stalls for milch cows, in which they may be fed separately from the herd.. The balance is open, with a rack running through its length and dividing it; and the whole is surrounded with unsheltered margin, which prevents the stock from being necessarily confined within the limits of the building.

"As soon as I lay by my crop, I haul out my bulk of manure, and deposit it in heaps around the field, or fields, for which it is designed; and then having my laboratory empty and ready for operations, I commence the preparation of another supply.

"First;—I cover the whole area, in and out of the house, 18 inches thick with oak leaves and pine straw—the common litter of the woods—which it takes me, with two horse carts, at 15 loads a piece a day, four weeks to accomplish. My first deposit, then, is 720 loads, gathered into heaps and conveyed to the pen, in the following manner: As soon as I cease to work my crop, I put all my women and boys to 'raking trash,' by way of getting a start. In a few days I discontinue this operation, only keeping two elderly women to prepare for, and load the carts, which have been running from the commencement of the 'trash raking.' These carts are driven by boys, as experience proves that they will perform more, at that particular kind of business, than the primest men. To ascertain that their task (with men 15 loads—but dependent, of course, upon circumstances,) is given me honestly, I make the drivers empty the loads touching, but in distinct and undisturbed heaps, which remain so until I or my agent counts them, and inspects their size. The carts are not stopped for four weeks; and consequently the two old women and the two boys take no share in stripping and curing fodder.

"When I have my deposit complete, I adjust and level the whole, which will give a coating of not less than 18 inches deep. This I cover with the offal of my stables, which I have purposely delayed to cleanse. And this operation of cleansing my stables, and spreading their contents in a layer over the area of my cow-pen, is performed monthly. In the mean time my pen receives nightly additions from my stock of cattle, which are penned regularly throughout the year. Thus I make a compost which is stronger than cow-pen manure, and not so heating as stable. Directly after the Christmas holidays, and before I commence to plough in my oats, I devote a fortnight to the same operation, that I described as occupying the two carts and their four attendants, during the month of August. And after this I continue the process of strengthening the compost with the cleansing of the stables. As I have sides, a front and back, made of light laths, temporarily attached to my carts, while I am hauling trash—each load, light and dry as it is, and trampled down into the frame, will give a load of manure; and therefore, on the 1st of each August, I have 720—360—220—(the monthly cleansing of the stalls of 20 horses,) thirteen hundred loads of compost to haul out. Of this I find that 16 loads to the acre are sufficient, not only to keep up, but to improve my clay lands. Thus the reward of my labour and trouble, is the ability to plant every year, and yet improve 80 acres of land.

"Suppose I did not pursue this system, and what would be the consequence? I must either till that area to less and less profit every year, until I destroy its value entirely; or I must have an equal, additional area, with which, to alternate it, and so be enabled to keep up both by resting. Eighty acres of land in my neighbourhood, at fifteen dollars per acre, will cost twelve hundred dollars; and thus, besides the gain of an annual increased product, the saving of an investment of twelve hundred dollars is made. And at what expense? Some trouble I confess, but no loss; for no labour, human or brute, is subtracted from the preparation for the planting, working, or harvest of the crop.

"It would be very easy to increase the quantity of manure made in this manner, if my means were more ample; but I am limited, both in the quantity of my available trash, and in the number of my cattle."—*Selected.*

Evil may spring unchecked,
Within the human soul;
But if such spot be not removed,
It must corrupt the whole.

Preservation of Peach Trees.

Whitemarsh, Sept. 1st, 1842.

To the Editors of the Farmers' Cabinet,—Having to a certain extent, succeeded in the cultivation of the peach in a limestone soil, generally considered uncongenial to its growth, I forward by your request, a short account of the method of cultivation and mode of nursing adopted.

The soil of the peach orchard is underlaid with primitive limestone, but is not of the yellow cast and tenacious texture, so general in limestone regions; which, however adapted to the growth of wheat, has but little affinity with any description of fruit. It is, on the contrary, a rich loam, and constitutes a part of the garden enclosure, the trees occupying about half an acre, and bordering on the Wissahickon creek. This location, in the immediate vicinity of the water, may possibly have a beneficial effect.

The orchard, consisting of about fifty trees, was planted in the spring of 1836. At the time of planting the ground was in grass, but was then subjected to the action of the plough, and has since been thoroughly tilled every year, yielding alternately heavy crops of sugar beets, potatoes and ruta baga. The trees have also been examined once, and sometimes twice a year, for worms, but have not generally been much infested by them.

This comparative exemption is no doubt in consequence of the various alkaline substances which have been successfully used. The most remarkable and immediate effect has followed the use of what is termed "fallen lime," fresh from the kiln; which, when applied in the proportion of about half a peck to the roots of unhealthy trees, and covered with earth, has restored a healthy colour to the leaves; and trees which did not look worth a week's purchase, have produced fair crops of good fruit in after years. Ashes from anthracite coal, have also been applied with very good effect. These applications have usually been made in the spring, but occasionally later in the season. This year, wood ashes were used in June, with a marked benefit. Soap suds also have been applied to advantage. In fact, any substance, which by its caustic quality is destructive of insect life, must be beneficial, provided it be not applied in quantities sufficient to injure vegetation. It is an interesting and encouraging circumstance, that several substances combine the properties of destructiveness to insectiverous life, with a direct and positive stimulating effect upon vegetation. In illustration of this fact, my friend Dr. Noble, has applied oil soap to a portion of his extensive peach orchard, in the State of Delaware, to manifest advantage.

The mild weather of January and February, will sometimes bring forward vegetation, so that the peach trees are liable to blossom prematurely. An attempt has been made to obviate this difficulty, by covering the roots about the body of the trees with wheat straw, when the ground is deeply frozen in winter. This process, by retarding vegetation, has secured them from the danger of the late frosts.

When, however, an intensely severe frost occurs late in winter, so as to freeze the germ of the fruit, which is developed very early, all expectation of a crop must be abandoned. This misfortune is easily verified, by an examination of the germ, when the embryo peach will be found black and blasted.

These observations are not set forth under the impression that they are new, for doubtless they are familiar to those enterprising farmers, who, by their successful cultivation, supply our city markets with this most healthy and delicious fruit;—such an universal favourite, that it would be an era in a lifetime, to find a man who did not like a peach. It is to be hoped that larger and more successful producers, may be induced to favour you with a detail of their mode of operations, to the advantage of the agricultural community and the public at large, whose interests indeed are identical.

The writer had the pleasure of examining the extensive peach orchard of Major Reybold, near Delaware City, in the month of May; at which time that enterprising farmer had a prospect, as he stated, of about half a crop. It covered 120 acres of land, and contained 12,960 trees. His half a crop has produced 6,000 baskets, which have been chiefly sent to the New York market. A remarkable fact in connection with the produce of this and the neighbouring orchards, was mentioned by him and confirmed by several other gentlemen of that vicinity. A cold north-west breeze had prevailed during an afternoon while the trees were in bloom, which was accompanied in the evening by so severe a frost, that the total failure of the peach crop was anticipated. About 11½ o'clock at night the wind changed to south-east, which blowing over Delaware bay, so far modified by its mildness and moisture, the air of that portion of the orchard which was nearest the water, and descended towards it, that the blossom was saved. The other portion of the same orchard, which inclined inland, and had received the full force of the cold blast, was almost a total failure.

From the healthy appearance and vigorous growth of many of my trees, I have a hope of securing a degree of longevity for them, so desirable, considering the care and expense inevitable in their cultivation. Several of them are now about six inches in diameter, a foot from the ground, and the produce this year, is estimated at from 30 to 40 bushels.

That peach trees are capable of attaining to considerable longevity, can be attested by many of your readers, who may remember them struggling for years in the hedge-rows of bushes, which were wont to adorn the fences of old fashioned farmers. There is now a tree in the garden of a lady in Arch street, Philadelphia, planted 25 years ago, which this season produced a good crop of fruit. William Cobbett also, in his valuable little treatise, "The American Gardener," page 199, refers to a peach tree in France, in full bearing, as 50 years old.

With great regard,
I remain your friend,
Morris Longstreth,
Valley Green.

From the New Genesee Farmer.

Use of Camels on the Western prairies.

Mr. Editor,—The writer of this is a native of Russia, and has spent many years of his life in that portion of the empire, which borders on the Ural and Volga rivers, north of the Caspian sea.

I have, during the last two years, visited many parts of the United States; lately I have been in Missouri, Iowa and Wisconsin, and during my journeyings have had the fact strongly impressed on my mind, that the *camel* would prove a most valuable animal for burden in those prairies, and especially for traversing the country west even of the states I mention, where water is sometimes not found for days.

Camels used only for travelling, possess great speed, and in the unsettled country would be found good to carry mails and convey intelligence. Their speed is great, 120 miles being a common day's travel for speedy animals.

Some individuals have expressed to me doubts of their being useful in this latitude. I mention the place of my birth only to show the most doubting, that in a more rigorous clime they are extensively used. The breeding of camels is not more expensive than horses.

You, no doubt, are informed with regard to this subject, and I am convinced can give to persons desirous of breeding the camel, valuable information through the medium of your journal. They (the camel,) can be obtained on the Black Sea, and if agricultural societies would import a few pairs, they would confer a great advantage on this country.

From 600 to 1000 pounds, with a rider, is a common load for the camel; and the commonest herbage, even weeds and twigs, will suffice for their sustenance while enduring the severest labours.

I was advised by some gentlemen, to whom I casually mentioned this subject, to write to some editor of an agricultural paper of this matter, and being about to go to the east through Canada, have thought best to write to you from this place.

Yours, with respect,
H. Bohlin.

Buffalo, July 6th, 1842.

For the Farmers' Cabinet.

Blight on Trees.

The present very general prevalence of blight on almost every species of tree, especially on our fruit trees, may, I conceive, be attributed to the almost unprecedentedly wet summer which we have passed through; and which, although tending to a most luxuriant growth of wood, has not been friendly to the ripening and hardening it; it may therefore, be termed a crude, incipient growth, the juices of which, not being sufficiently elaborated and concocted, have become putrid; and the consequence is—according to a writer in the Cabinet, whose theory on this subject appears to me quite satisfactory—a general blight; the *effect*, and not the *cause* of disease in the tree. And I have now before me, what I consider evidence for the truth of the doctrine inculcated by the writer above mentioned, (when he proposes to raise our cereal crops strong and healthy, without the stimulating and immediate aid of manure; considering that what tends to induce constitutional *strength* in the plant, is the most likely to secure it from blight in all its different shapes,) for, adjoining my house, there is a drooping willow, hollow and much decayed in the trunk, which is covered with one mass of blight; while an adjoining willow, in perfect health and vigor, and whose branches intertwine amongst those of the infected tree, is very nearly exempt from a particle of blight. And again, adjoining these is a mulberry tree, whose bleeding trunk exhibits signs of the gnawing of the worms at several openings; this tree is also most sadly attacked by blight, while others surrounding it, which show no signs of decay, are comparatively free from it. Several pear trees also, whose premature fruit has been falling off during the summer, before it was half grown—showing signs of inward disease—are now covered with a thick pall of the web of the caterpillar, *the effect of disease, no doubt.* I am, therefore, a firm advocate for the theory so strongly advocated by your correspondent, and by many excellent writers of former days—"honest John Lawrence," in particular—that blight, "with all its sad concomitancy," is the consequence of disease; and that the most likely way to escape it, is to raise our crops strong and healthy, rather than big and gross; depending more on the constitutional vigor of the plant, than on its extrinsic appearance of luxuriant growth.

P.

Lower Dublin, September 6th, 1842.

For the Farmers' Cabinet.

Subsoiling.

Messrs. Editors,—I have just finished subsoiling a field of 14 acres, after once ploughing a clover sod, (the first crop of grass having been made into hay, the second mown for seed;) which it is my intention to seed with wheat, and slightly to top-dress during winter, with manure from the cattle yard. What will be the result in case of a blighting year! and shall I escape the fly, while my neighbour on his oat stubble, well pulverized and highly manured, breeds millions? I am free to confess, that is my hope—whether well or ill founded, time will show. My management has been, to turn with a small furrow, the clover sod about three inches deep only, as the soil is naturally thin; and to subsoil, say about two inches more, so as effectually to break up the hard-pan, and but little else: this plan, it will be perceived, is quite different to that which has been uniformly urged in the operation of subsoiling, which is, to send the plough down to the beam at once; but I have an idea that such an extremity may not be advisable in my case, whatever it might be in a deep, rich and stiff soil; for as the winter rains will wash to the bottom of the pulverized subsoil, a great portion of the manure from the surface, it would be lost to the present wheat crop, by reason of its being diffused through so large a mass of sterile earth: I therefore prefer a partial loosening of the subsoil the present season, which can be deepened the next year; for I am one who will not grudge the expense of the operation every year, if it have the effect which I fully expect from present appearances; as I am not so unreasonable as to expect *something from nothing*. I admit it is double labour, but it does not follow that all labour is *trouble*—nay, the most pleasant work that I have been engaged in, is this subsoiling, which can be fully performed by a lad of 15 years, and a pair of small horses; indeed, with my present views, I consider a strong horse and the small subsoil, Prouty plough, competent to the task on most of the soils in this part of the country. My opinion is, that the part which I have subsoiled the present season, might be brought up the next year and be mingled with the top soil; while another couple of inches may then be subsoiled, to be again turned up the following year, if found advisable; so that I propose to ameliorate my soil by degrees, as my means are at present slender, and my soil thin and weak; and I am very desirous of knowing what are the opinions of your intelligent readers on this, to me, very interesting subject. Will they, at the same time, state their objections, if any, to the mode which I intend to pursue in sowing the land above described, with wheat—it is, to allow it to lie untouched for fifteen days, then to roll it heavily, harrow once the same way the land was ploughed, sow the seed, two bushels and a peck per acre, and after two or three harrowings, roll again; my object being to furnish on my light soil, a close seed bed for the wheat, to prevent a too lax and premature growth before winter; which I calculate to be the true *cause* of the prevalence of blight in all its variety, the fly being one of the *effects*. S.

Berks County, Sept. 10th, 1842.

Manufacture of Silk in Ohio.—We find the following statement in one of our exchange papers. There are many evidences in different parts of the country, that notwithstanding the severe shock which the silk culture received from the explosion of the Multicaulus bubble, it is by no means prostrated. It is really very gratifying to observe the amount of enterprise and perseverance, that is brought to bear upon this subject. We hope they will never tire, unless it shall be thoroughly demonstrated that silk cannot be profitably made in the United States.—Ed.

"Mr. John W. Gill, of Mount Pleasant, Hamilton county, Ohio, manufactured during the last year, upwards of $9,000 worth of silk goods. His clear profit on the capital invested, was ten per cent. He has three large cocooneries, and commenced this season to feed upwards of two millions of worms, which he calculates will yield him upwards of six hundred bushels of cocoons, worth at present prices, $2,000, but much more to him, as he will manufacture the whole crop into various fabrics."

Conquer with Kindness.

If you would have friends, you must show yourselves friendly. I once had a neighbour, who, though a clever man, came to me one hay day, and said, "Squire White, I want you to come and get your geese away." "Why," said I, "what are my geese doing?" "They pick my pigs ears when they are eating, and drive them away, and I will not have it." "What can I do?" said I. "You must yoke them." "That I have not time to do now," said I. "I do not see but they must run." "If *you* do not take care of them I shall;—what do you say Squire White?" "I cannot take care of them now, but I will pay you for all damages." "Well," said he, "you will find that a hard thing, I guess." So off he went, and I heard a terrible squalling among the geese. The next news from the geese was, that three of them were missing. My children went and found them terribly mangled and dead, and thrown into the bushes. "Now," said I, "all keep still, and let me punish him." In a few days the man's hogs broke into my corn; I saw them, but let them remain a long time. At last I drove them all out, and picked up the corn which they had torn down, and fed them with it in the road. By this time the man came in great haste after them. "Have you seen any thing of my hogs?" said he. "Yes, you will find them yonder, eating some corn which they tore down in my field." "In your field?" "Yes," said I, "hogs love corn, you know—they were made to eat." "How much mischief have they done?" "O, not much," said I. Well off he went to look, and estimated the damage to be equal to a bushel and a half of corn. "O no," said I, "it can't be." "Yes," said he, "and I will pay you every cent of damage." "No," I replied, "you shall pay nothing." "My geese have been a great trouble to you." The man blushed and went home. The next winter when we came to settle, he determined to pay me for my corn. "No," said I, "I shall take nothing."

After some talk we parted; but in a day or two I met him in the road, and fell into conversation in the most friendly manner. But when I started on he seemed loath to move, and I paused. For a moment both of us were silent. At last he said, "I have something labouring on my mind. Those geese.—I killed three of your geese, and shall never rest till you know how I feel. I am sorry." And the tears came in his eyes. "O well," said I, "never mind, I suppose my geese were provoking."

I never took any thing of him for it; but whenever my cattle broke into his field after this, he seemed glad—because he could show how patient he could be.

Now, conquer yourself, and you can conquer with kindness, where you can conquer in no other way.—*Vermont Chronicle.*

For the Farmers' Cabinet.

Autumnal Ploughing of light land.

It is almost universally admitted, that, much as heavy land may be benefited by an autumnal ploughing, by which the soil may be laid up high and dry to the action of winter frost and snow, to plough up and thus expose light land to the winter rains, would be improper in the extreme, as much of the pulverized surface would be washed away, and the land be rendered so flat and compact, as not to be operated upon by the harrows at the time of seeding in the spring: this, I say, is the very general opinion, even of practical men; but I have found that it is not so in fact; and a friend has turned my attention to a case in point, which so exactly corroborates my own experience, that I must, with your permission, copy it, for insertion in the pages of the Cabinet. It is contained in "Lisle's Husbandry," a work of infinite merit, and abounding in pleasing and instructive experiment. The author says:

"On the 20th of October I began ploughing a field of 52 acres, for oats, to be sown in the spring following, the land turning up so fine and small, that it was supposed the ground by the winter rains, would fall flat. I had finished the ploughing by the 20th of November, and notwithstanding it was *light white* land, and fell so fine, yet at the oat-seed time, the 20th of February, the harrows being good, the oats were laid deep enough in the furrows, or seams; for although the earth seemed to be closed on the surface, yet with five times harrowing, the seed was well covered, the effect of early ploughing in the winter. This method of fallowing light land succeeded admirably well, and answered in every respect a good purpose; the oats prospered, and bore a better colour than others which I sowed in strong land after two earths or ploughings, the same year; and when I cut them, they were, in every respect, *great oats.* I conclude, therefore, from this and other like experiments, that ploughing such light lands, which fall fine, thus early, is best; since the oats can be let deep enough into the soil, and by that means the ground so ploughed, taking the winter rains, will retain so much moisture as to bring the oats all up at once; the contrary of which is the danger, when such light lands are sown in the spring, immediately after once ploughing. And for the same reason, I fallowed such light lands for barley as early as the middle of October, the present year, that so, they being beaten flat by the winter rains, and being drunk with them, might retain sufficient moisture to bring away the barley in the spring."

I would add, from my own observation of many years, no pulverization that can be given by artificial means, is at all to be compared in effect with that which is obtained by exposure to the frosts of winter; in such a seed-bed the weeds do not grow, nor does the surface, during the summer, become so indurated by drought, as that made fine by harrow and rolling. A. Fuller.

Pottsville, September 14th, 1842.

From the Farmers' Gazette.

Large and Small Farms.

Mr. Editor,—We candidly believe, if there is one farmer more to be pitied than another, it is that man who possesses so much land that he hardly knows what to do with it. Such a man must be unfortunate in having such a large number of acres, that he cannot pay that attention to his farm which he otherwise could do, did he own but a small one. Yet there are many who are so bent on having a large number of acres, that they will sacrifice almost every thing, so that they can be able to count and add acre to acre to their farm, without once thinking how they are going to improve it. Now the real wealth of a farmer does not consist in the number of acres which he owns; but it rather consists in the manner in which he cultivates them. When we can once get farmers to believe that it is better to cultivate a few acres well, than to scatter the same amount of labour over a large tract of land, then shall we believe that the farmer has waked up to his true interest.

The fact is, it has been the universal fault with the farmers all over our country, so that the continual cry has been, "land! land!" and "land ho!" And some of them, not satisfied here, have gone to the "Far West," and settled on the edge of some "Prairie," and have looked across the boundless tract, till their eyesight grew dim; and still we suppose their cry is, "land ho!" We are happy to say, however, that there is a redeeming spirit abroad in the land, and that farmers are beginning to see their interest in cultivating a small farm well, rather than to go over a large tract with the same amount of labour.

Now if land cannot be made to pay five or six per cent interest to the labourer, then he had better have his money out at interest, where it will be safe. We have actually known farmers in our town, who if they would give away one half of their acres, and put the extra labour on the other half, would in the end be gainers. Suppose a farmer, with two hundred acres of land, goes on and scatters his labour over his farm, and if he can keep his fences up, and get enough off his farm to support his family and pay his taxes, he thinks he does well. Now let this farm be divided into four fifty acre farms, and put a good farmer upon each quarter, and the consequence is, that each of the farms is brought into a good state of cultivation. And more than that, one of the farms under this management will produce more than the whole four did when they lay together. If any one should be so unfortunate as to have one of these large farms, if he wishes to enjoy the comforts of a farmer's life rightly, then let him get rid of part of his farm. But if you do sell, don't sell to a man who has got more land than you have, for that would only make bad worse; rather talk with him, and tell him that he has got more land than he wants, now; and that neighbour A has just begun the world, and wants a small farm, and that you will sell part of yours; and if he will sell part of his to neighbour A, all three of you then will each have a snug farm. No farmer ought to have more land than he can take care of and cultivate to the best advantage; and generally speaking, a 50 or 75 acre farm is better to a man than one of a hundred acres.

A good farmer, who wishes to enjoy the realities of a farmer's life, wants to see every thing prosper and flourish around him; to see good fences, good crops, thrifty orchards and fruit trees growing around his dwelling. These every farmer can see, who has a snug and convenient farm to labour upon. We believe that one of the greatest blessings of an earthly nature, which a man can have here below, is to have

"A little farm well tilled,
A little house well filled,
And a little wife well willed."

Yours, truly,
Levi Durand.

Derby, August 25th, 1842.

Cause of Mildew in the Grape.—"The cause of this fatality, I suppose, arises from the great rush of sap after warm rains in the summer, which is forced up in such quantities, and with such power as to burst the berry, or to cause it to bleed at every pore, when it soon moulds, and the whole cluster becomes a perfect fungus."

Langworthy.

Anecdote of the Ass, &c.

Ve make the following extracts from the first Vol. " Jesse's Gleanings in Natural History," which have en kindly placed upon our table, and from which we rpose occasionally to enrich and diversify our col- ins. It is so engrossing and delightful a book, that almost fear to take it up, lest it should too long ptivate us from severer duties. The author and his ojects, present themselves with strong claims to the niration of such as long to leave "the crowd, the m, the shock of men," and go forth into the wide ds and forests, where they can hold "converse th nature's charms and view her stores unrolled." sse was remarkable for the closeness of his obser- tion on all that was passing, as well as for that pe- iar adaptation of feeling, which enabled him to de- ht in every evidence of enjoyment in animated na- e, and to luxuriate in contemplation of every thing it was beautiful around him. The form of a leaf, a flower, little facts and circumstances in the econo- of Providence, had irresistible charms for him, and erved like others more prominent, to show the per- t and beautiful manner in which every thing has en created." The hinge in the wing of an insect, as tainly manifests benevolence of purpose, as do the ole proportions of the elephant. Reflections of this id awakened the best feelings of our author. The leams and glances of nature," left sunny recollec- ns on his mind, which, to use his own language, in only be appreciated by those who have felt them." divest the mind of his reader of that "sullenness iinst nature," which Milton, in one of his happiest ods, so beautifully speaks of and so delicately re- oves; and to leave it thoroughly impressed with se "sunny recollections," was one of the avowed ects of the writer; and it appears to us he has suc- ded admirably. The gleanings were chiefly written th a view to "portray the character of animals, l to endeavour to excite more kindly feelings to- rds them." That there "will be a fearful day of koning for those who have inflicted wanton and necessary pain on those objects which were given a bountiful Providence to be used, and not abused," author thinks "no one can entertain a doubt."

The circumstances related below, show an instinc- e sagacity, which cannot fail to interest the younger tion at least, of our readers.—Ed.

The following anecdote was related to me Edward Hawke Locker, Esq., one of the vernors of Greenwich hospital, the cir- mstance having happened while he was the Mediterranean. It is also mentioned a note in Messrs. Kirby and Spence's En- nology, who state that they had it from eutenant Alderson, of the Royal Engi- ers, who was personally acquainted with e facts.

In March, 1816, an ass, the property of ptain Dundas, R.N., then at Malta, was ipped on board the Ister frigate, Captain rrest, bound from Gibraltar for that island. ne vessel having struck on some sands off e Point de Gat, at some distance from the shore, the ass was thrown overboard, to give it a chance of swimming to land—a poor one, for the sea was running so high, that a boat which left the ship was lost. A few days afterwards, however, when the gates of Gibraltar were opened in the morning, the ass presented himself for admission, and proceeded to the stable of Mr. Weeks, a merchant, which he had formerly occupied, to the no small surprise of that gentleman, who imagined that, from some accident, the animal had never been shipped on board the Ister. On the return of this vessel to repair, however, the mystery was explained; and it turned out that Valiante (so the ass was called) had not only swam safely to shore, but without guide, compass, or travelling map, had found his way from Point de Gat to Gibraltar, a distance of more than two hundred miles, which he had never traversed before, through a mountainous and intricate country, intersected by streams, and in so short a period, that he could not have made one false turn. His not having been stopped on the road was attributed to the circumstance of his having been formerly used to whip criminals upon, which was indicated to the peasants, who have a superstitious horror of such asses, by the holes in his ears, to which the persons flogged were tied.

I have also been assured that a favourite cat, belonging to a nobleman, and who had been conveyed to his country-seat more than an hundred miles from London, found her way back to his house in town. Nothing can be more extraordinary than the way in which bees find their way back to their hive. Place it amongst hundreds of others, exactly similar in outward appearance, or at the top of a house in London, or concealed in the thickest wood, and the bee will regain it without the slightest apparent difficulty. Huber says they fly to it with an extreme rapidity, and as straight as a ball from a musket. Nothing can show more forcibly the wonderful instinct which has been given to these insects, by the Creator. If they experienced any difficulty in finding their homes, how much time would be lost, and how inadequate would all their labours and industry be, to furnish a sufficient store of honey to exist upon during the winter! I have always observed, that when a fresh hive has been brought to my garden from a distant place, the bees employ themselves on first leaving it, not in collecting honey, but in making themselves acquainted with all the neighbouring objects, and these objects may possibly serve to guide them to their respective homes. Some naturalists are of opinion that this recognition of home is the result of memory. Perhaps in some instances it is so, but memory could not have guided an ass over two hundred miles of country, which he had never passed before; and the same unexplained instinct which brought him back to his stable at Gibraltar, may guide the bee to his hive.

This instinctive sagacity, which guides animals who have been taken from their old haunts, in making their way back to them, appears in some to whom we should have been less disposed to attribute it. I have an anecdote from a gentleman, who resided some years on an estate high up the Susquehanna, of some pigs, which, having been brought in a sack fifteen miles through an American wood, by the next morning had found their way back, from their new, to their old home. I have also been assured that Welsh sheep have been known to find their way back, from the neighbourhood of London, to their native mountains. It is no uncommon thing for dogs who have been taken a great distance in carriages, to make their way home again, and that in a very short space of time. A friend of mine took a pointer dog in his carriage to some shooting ground in Scotland, more than a hundred miles from his house. Upon receiving some correction from his master, he left him, and made his way back to his kennel.

A friend of mine had a poodle-dog possessed of more than ordinary sagacity, but he was, however, under little command. In order to keep him in better order, my friend purchased a small whip, with which he corrected the dog once or twice during a walk. On his return the whip was put on a table in the hall, and the next morning it was missing. It was soon afterwards found concealed in an out-building, and again made use of in correcting the dog. It was, however, again lost, but found hidden in another place. On watching the dog, who was suspected of being the culprit, he was seen to take the whip from the hall table, and run away with it, in order again to hide it. The late James Cumming, Esq., was the owner of the dog, and related this anecdote to me.

Friction Paste for Wheels.—The best composition that can be prepared to relieve carriage wheels and machinery from friction, is composed of hog's lard, wheat flour and black lead, (plumbago.) The lard is to be melted over a gentle fire, and the other ingredients—equal in weight—may be added, till the composition is brought to the consistency of common paste, without raising the heat, near the boiling point. One trial of this paste, will satisfy any one of its superior utility.—*Am. Mechanic.*

From the Cultivator.

Ross' Phœnix Strawberry.

Messrs. Gaylord & Tucker.—At your request, I send you an account of my seedling strawberry, which promises to be a great accession to the lovers of this delicious fruit. In June, 1836, I was in Mr. Beekman's garden in this town, and he gave me a strawberry from the variety called Keen's seedling, which I carried home as a present to my wife. The seeds of this strawberry I separated carefully from the pulp, by rubbing them in dry beach sand, and then sowed them in a 7 by 9 glass box, filled with good earth, which was placed behind the coal house of E. Gifford, Esq. The seeds came up well, but had no care taken of them. Next spring I happened to notice the box, and found all my plants had been destroyed by the frost, with a single exception. The box, with this plant was removed to my house, when finding it had a singular round leaf, different from the original strawberry, I took better care of it. In the spring of 1838, having no good place of my own, I removed it to the garden of Mr. Brooksbank, but owing to the vicinity of some flower beds, the plant suffered much. In 1839, I found that one of the runners had set for fruit, and I removed it to my garden, where it yielded some fine fruit. Next year, I had some berries that measured 5½, and one that measured 6¼ inches in circumference. The fruit was so much admired by our best Horticulturists who saw the plant and fruit, that I determined to send specimens to your city and New-York, in 1840, but was prevented by some trespasser, who carried off the whole. I let Mr. Wilson, Horticulturist of your city, and Mr. J. T. Perkins, of Hudson, have a few plants, both of which have produced fine fruit; and Mr. Perkins, gave some single berries that filled a wine glass. The fruit is of fine appearance and excellent flavour.

I measured some of the leaves out of curiosity, which were 5¾ inches in diameter.—When on a good soil the plants grow very strong, and require room, as one plant will cover a space of 3 square feet in one year; but if deprived of their runners in summer, these will make large plants in spring. I think this strawberry will produce the largest strawberries, and yield the greatest number, of any variety I have seen, or that is cultivated in this neighbourhood. The name above given, was conferred by friend Wilson, from the circumstance of the seedling having twice narrowly escaped destruction. Yours with much respect,

Alex. Ross.

Hudson, July. 1842.

To kill Weeds.

Is there any manure that will kill WEEDS? is a question not unfrequently put. Will nitrate of soda, or nitrate of ammonia, or guano, or urates? That such questions should be asked, proves one thing at least, that there is a general desire to know how to extirpate weeds. We wish we could add, that they also indicate some acquaintance with the rudiments at least of vegetable physiology.

Weeds, like other plants, have each their peculiar constitution, prefer certain kinds of food, and perish on the application of others. We have seen a pound of nitrate of soda administered to a Seakale plant without visible effect; half an ounce would probably destroy a Rhododendron. Common stable manure is prejudicial to Coniferous plants, and in overdoses will kill them; an Oak feeds greedily upon it. So it is with weeds. Excessive doses of salt will destroy all ordinary vegetation, weeds included, but promote the growth of Asparagus in a most remarkable degree, thus proving itself to be a poison to one plant and a nutritious food to another. But salt cannot be used in large doses to extirpate weeds generally, because some may imitate the Asparagus, and *may* flourish under its action, and most crops will certainly be destroyed by it. Professor Henslow succeeded in destroying moss and weeds on gravel-walks, by means of corrosive sublimate, green vitriol, and blue vitriol, especially the last. But corrosive sublimate destroys every living form of vegetation, as well as the weeds, and the two sorts of vitriol have no permanent action, encouraging the subsequent growth of many sorts of plants, and so promoting the vegetation of weeds rather than destroying it.

In practice these chemical agents can only be employed for the destruction of weeds in certain special cases, such as the Asparagus, which thrives under doses of salt, which kill most other plants; or as Seakale, which seems to be affected in the same way; or as Tobacco, which feeds greedily upon quantities of nitrate of soda which would destroy any ordinary vegetation. In general, we must look to other means for ridding ourselves of troublesome weeds, and we shall find those means in *industry and common sense.* The two separate are good things, but they are better mixed together. The plain and obvious rule is to pull them up as fast as they appear, and while still in the state of seedlings. Then every plant that is removed is effectually destroyed, and leaves no young ones behind it. Any boy, at half-a-crown a week, can be taught to distinguish them; and if the plan is persevered in, there will very soon be nothing for the boy to do. Strict attention must, however, be paid to their thorough extirpation when young; it will not do to pull up *almost* all, and to leave the remainder to seed; for in that case the labour has to be all gone over again.—*Gardeners' Chronicle.*

The Turnip Fly.

FROM a letter, signed "A Tanner," in the "Mark Lane Express," we copy the following simple and, as is said, efficacious remedy for checking the ravages of this destructive insect:—"In my constant intercourse with farmers, I have frequently heard their lamentations on the destructive ravages of the turnip fly. A small patch of turnip-seed was sown in my garden some weeks since, and thought no more about for a considerable time; till one day chancing to pass by it, I discovered, on closer inspection, that the young plants were swarming with fly, and already half destroyed. I lost no time in applying what I hoped would be a remedy for the mischief; this consisted of some stale liquid from a lime-pit, scattered over the plants with a watering-pot. On revisiting the patch next day, I observed that the enemy was gone, and scarcely a fly was to be seen, except one solitary little wretch that was perched on a plant just unfolding; but not one could be seen on any plant that had received a sprinkling from the contents of the watering-pot. The next apprehension was, that the sprinkling might have injured the plants; a few days, however, removed all doubt, for rain came and washed the sprinkling (of lime and animal matter in combination), from the plants down to the roots, and they have since grown away in rank luxuriance, have been thinned once, and require the same operation again. Thus, by this sprinkling, the plants received protection from the fly *first*, and then, when the rain fell, were nourished by a highly-stimulating manure. It will, however, be said, but of what avail is this information? Farmers have not access to the lime-pits of the tanner; and if they had, the quantity to be procured would be so small as not to be of any material benefit; which is very true, and therefore the writer would recommend every farmer to have his own lime-pit in his farm-yard,—if so situated as to take the drainings of the yard, all the better; or where water may be obtained, a bricked pit or tank, into which should be thrown a few quarters of lime, with a sufficiency of water; and, when it can be procured, all manner of refuse animal matter cut in pieces—such as a dead sheep, horse, &c., and the entrails of what may be slaughtered. Sometimes, on the coast, a load of worthless fish may be obtained. Farmers are little aware what an amount of rich liquid manure may be obtained at a very trifling cost. Although not one myself, I know, from the effects produced at various times on a small scale in my garden, that animal matter in solution with lime, is an active and powerful manure; and what induced me to think it might be a preventive to the fly was, that I had observed, however stale and fœtid, *animal life* cannot exist in it.

Premiums of Pennsylvania Horticultural Society.

The Committee on fruits, beg leave to report that they are agreeably disappointed in the quality as well as quantity of delicious fruit, exhibited at this fourteenth annual display of the Horticultural Society. After the most patient and delicate attention to their various duties, they award premiums as follows:

NATIVE GRAPES.

Best Isabella, to John M. Ogden.

Second-best Isabella, to Thomas Savery.

Best Bland, or Powell, to Townsend Hilliard.

Second-best Bland, or Powell, to do.

Best Catawba, to William Sinton, gardener to Gen. Patterson.

Second-best Catawba, to C. S. Hunt.

Best Elsinborough, of another variety, to Mrs. B. Browning, Camden, N. J.

FOREIGN GRAPES, OPEN AIR.

Best Black, or Red Hamburg, to Edwin Middleton.

Best Hansterello, to Gebhard Harris.

Best Golden Chasselas, to Townsend Hilliard.

Best Malaga, or Portugal, to James Laws.

Best of another variety, to Townsend Hilliard.

BEST FOREIGN, UNDER GLASS, WITHOUT ARTIFICIAL HEAT.

Best White Syrian, to A. Pascoe, gardener to Nicholas Biddle.

Best Black Hamburg, to Robert Egee, gardener to Joseph Cowperthwait.

RAISED UNDER GLASS, BY HEAT.

Best St. Peter's White Muscat of Alexandria, Frankenthal, Constantia of Zante, and Black Hamburg, to William H. Carse, gardener to Nathan Dunn, N. J.

Best White Syrian and others, to Edward Noyes, gardener to R. S. Field, Princeton, N. J.

Best peaches, not less than one peck, to Jacob Reybold, Delaware.

Second-best peaches, to John Satterthwait.

Best two dozen, to John Reybold.

Best bushel, (Tippecanoe,) to George Thomas, N. L.

Second-best do. contributor unknown.

Best Seckle pears, one peck, to Benjamin B. Shuster, New Jersey.

Best Butter pears, one peck, to W. Chalmers, Jr., gardener to George Pepper.

Best apples, one peck, contributor unknown.

Second-best apples, one peck, to George B. Deacon, Burlington, N. J.

Best apples, one bushel, to W. E. Rogers.

Three best watermelons, to J. J. Hatch, Camden.

Three second-best do. to Thomas Mullen, gardener to Miss Gratz.

Best quinces, half peck, to Judge Wilkins, Camden, New Jersey.

The Committee on vegetables, have awarded the following premiums:

Best potatoes, one bushel, to William Parry, of N. J.

Best Sweet potatoes, one bushel, to William Brown, of New Jersey.

Best onions, four dozen, to John Riley, gardener of the Insane hospital.

Best cabbage, six heads, Richard S. Field, Princeton, New Jersey.

Second-best cabbage, six heads, to Albinus L. Felton.

Best Red cabbage, six heads, to George B. Roessler.

Best carrots, two dozen, to Albinus L. Felton.

Best lettuce, six heads, to Anthony Felton.

Best endive, six dozen, to Jacob Engleman.

Best salsify, two dozen, to Anthony Felton.

The Committee also awarded the following honorary premiums:

For two fine Valparaiso squashes, and one fine mammoth pumpkin, to David Comfort.

For very fine egg plants, to Jacob Engleman.

For the best display of vegetables, to Anthony Felton.

For a fine display of vegetables, to Albinus L. Felton.

For the next fine display of vegetables, to J. Engleman.

For the best honey, to Jeremiah Comfort, of Montgomery county, Pa.

For the second-best honey, W. W. Keen, No. 106, south Third street.

For the next best honey, J. Laumaster, Burlington, New Jersey.

The Committee on flowers, awarded as follows:

For the best fifty varieties of dahlias, to Mr. George C. Thorburn, New York.

For the second-best fifty varieties of dahlias, to Wm. Carvill, Haverford college.

For the best twenty varieties of dahlias, to Gerhard Schmitz.

For the second-best twenty varieties of dahlias, to William Sinton, gardener to General Patterson.

For the best American Seedling parti-coloured dahlias, to Gerhard Schmitz.

For the best American Seedling self-coloured dahlias to Robert Kilvington, Lemon Hill.

For the best ten varieties of dahlias, grown by amateurs, to General R. Patterson.

For the second-best ten varieties of dahlias, grown by amateurs, to Gerhard Schmitz.

For the best and most appropriate design, formed of cut flowers, to Samuel Maupay, a triumphal arch.

For the second-best and most appropriate design, to Joseph Cook, gardener to William Norris, Esq., a very beautiful grotto.

For next best and most appropriate design, to Peter Fleming, gardener to W. R. Hanson, Esq., a very handsome urn, composed of flowers.

For the best pair of festoons, to William Chalmers, Sr., gardener to Mrs. Stott.

For the second-best pair of festoons, to Mrs. Archibald Henderson.

For the best bouquet, to Edward Smith, Camden.

For the second-best bouquet, to Daniel Maupay.

HONORARY PREMIUMS.

To Archibald Henderson, gardener to Wharton Chancellor, Esq., $8 for large fancy design.

To H. & A. Uber, $7 for a design of a temple.

To John Galt, gardener to Samuel W. Gumbes, Esq., $5 for a very beautiful flower urn.

To N. J. Jennings, Cedar Grove, $5 for a design of a grotto.

To James Pentland, $5 for a design of a spire.

To John Sherwood, $4 for a handsome design of cut flowers.

To R. Henry, gardener to W. E. Rogers, Esq., $4 for a fanciful design.

To Mrs. General Patterson, Miss Gratz and Robert Kilvington, $3 each, for a beautiful basket bouquet.

The New York State Agricultural Show.

Messrs. Editors,—I accompanied several of my neighbours to the late N. Y. State Agricultural exhibition at Albany, and a sketch of our observations and impressions will, I hope, afford some interest to your readers.

I shall not attempt a full or particular account of their proceedings; this may be obtained from official statements—and besides, the time spent amongst them was too brief to embrace all the interesting events of the occasion. Our chief purpose in visiting Albany, was to see the live stock of this, the oldest and most advanced agricultural section of the "Empire State," and at the same time to learn a little of their mode of managing such displays of "our country's glory." Of horses, they had a meagre collection for a State that abounds in the best of this noblest race of animals. They were about equal in number and quality to those exhibited at our county shows, which you know are nothing to boast of.

The horned cattle were numerous, especially the beautiful Durhams, several of which were very fine specimens of this excellent breed, and went far to sustain their high character; but in the aggregate, they did not come up to our anticipations, and it was evident that care enough has not been taken to select the best and most perfect of the race for breeders, but that they have adhered too tenaciously to the old unimproved stock, which gives most of them a harshness of skin at once perceptible to the touch—in a word, many of their short horns are bad handlers, and we would advise the enterprising farmers of New York, to bestow particular attention to this most essential point—where it is wanting, prime beef cannot be produced. The Durhams of Eastern Pennsylvania, are not perhaps quite so numerous, but in quality and high breeding, they are, we think, in advance of those exhibited at Albany.

We observed several Hereford cows which were in good condition, but we did not particularly admire their form and make, either as feeders or milkers; their chief value is doubtless in the males of their progeny, which furnish steers of high reputation for the shambles.

To our utter surprise and disappointment, few oxen, and almost no native red cows, or "American Devons," were on the ground, although we had supposed they abounded in a district contiguous to New England,—the land that sends forth so many noble oxen and fine steers; which, as workers, are unrivalled, and as feeders, only excelled by the *improved* short horns. There were, it is true, several show steers of great size and fatness, and some good yokes of oxen, but the *tout ensemble* was not equal to the annual display of this class, by our Chester county friends.

Of Merino, Saxony, Cotswold, Leicester, and Southdown sheep, there was a very fair and creditable display; the former three descriptions were more numerous and better than we have seen elsewhere; but the Leicester and Southdowns, are, in our judgment, exceeded in numbers and quality, by the Westchester shows, which is in fact a hard district to beat in these classes of sheep.

The hogs did not number so largely as this region of Berkshires ought to have done, and we suspect these *black beauties* are not in as high favour as formerly.—Seriously, we do not value them highly as a distinct race, but for the purpose of crossing with native breeds of too much coarseness, they are useful, and should be sustained. Several Derbyshire, and other English white hogs exhibited, were very handsome porkers.

Of agricultural implements, a large and various assortment was shown, which, for workmanship and ingenuity, commanded much admiration.

The interest, variety, and extent of the exhibition, were greatly increased by the display of field and garden vegetables, flowers, silk, &c.; and by the productions of the artizan, such as stoves, furnaces, planes, leather, harness, carriages, sleighs, &c. The ground occupied, was part of a race course remarkably well adapted to the purpose, and being fenced in, enabled them to charge 12½ cents each for admission, which must have contributed largely towards defraying their expenses, and is worthy of consideration by the Philadelphia Agricultural Society.

Their show, so far as it came under our notice, was conducted in an orderly and reputable manner. The concourse of people who visited the exhibition was immense, and evinced in the liveliest manner, the all-absorbing interest of agricultural pursuits. The true spirit is amongst the farmers of this great State, and good fruits must result from their enterprise and ambition.

Although *older* and *better* farmers, we of Pennsylvania, are behind our brothers of New York, in the cultivation of the mind. We want that enthusiasm, enterprising spirit and social intercourse, which are actively at work to their exaltation and improvement.

On the evening of the day we spent amongst them, a public discussion was held in the State house on the subject of education. The meeting was ably addressed by gentlemen from various parts of the Union, and resolutions adopted, recommending more attention to agricultural education and the adoption of a pattern farm and school, under the patronage of the State. A committee was appointed to report on the subject generally, at the annual meeting of the Society, next January. The ball being put in motion by able and resolute hands, will not stop until something substantial shall be accomplished.

Yours, truly,
A. S. R.

Philadelphia, October 6th, 1842.

For the Farmers' Cabinet.

Impressions found in Limestone.

Messrs. Editors,—The interesting account of human foot-prints in solid limestone,—see page 44, of the last Number of the Cabinet,—reminds me that the Mr. John Jones there mentioned, as having been employed by Mr. Paul Anderson to cut out the slab containing them, from its bed at low water mark of the Mississippi, can tell a far more wonderful story of a sword or dagger that has been found embedded between two immense blocks of limestone, I believe in the same neighbourhood, and by himself also. Would Mr. Jones favour us with an account of the discovery, as also, with his opinion as to the mode in which the weapon became thus embedded at the first; and which is, I presume, the best and only way of accounting for a phenomenon, that at the time of discovery, seemed to baffle all conjecture. I could state the circumstances, but the account would come so much better from the Major himself, and be read with such zest by your other subscribers, that I trust he will consent to oblige us. His view of the subject appears to me far more satisfactory and rational, than that of Dr. Owen, on the "foot-prints;" who, "after close examination and careful inspection, comes to the conclusion, that the impressions in question are not fossils, but an *intaglio* of artificial origin." J. P.

Delaware, September 18th, 1842.

To protect Grain from Rats.—One of our subscribers wishes us to state, for the benefit of his brother farmers, that green *Elder* boughs, scattered in and about a mow of Rye or other grain, will effectually protect it against the depredations of rats. These vermin are often very troublesome and destructive in their ravages in the farmer's barn; and if so simple a remedy will prevent their mischief, it should be known and remembered by all.—*Farmers' Gazette.*

Sound.

The diminution of the intensity of sound, in a rarefied atmosphere, is a familiar phenomenon to those who are accustomed to ascend very high mountains. The deep silence of those elevated regions has a physical cause, independent of their habitual solitude. Saussure relates, that a pistol, fired upon the summit of Mont Blanc, produced no greater report, than a little Indian cracker would have done in a room. Herschel noticed the comparatively small extent to which the voice can be heard, at an altitude of upwards of 13,000 feet on Monte Rosa. The height, however, to which an atmosphere, or medium capable of conveying sound, extends, far exceeds any attainable on mountains, by balloons, or even by the lightest clouds. The great meteor of 1783, produced a distinct rumbling sound, although its height above the earth's surface, was full fifty miles at the time of its explosion. The sound produced by the explosion of the meteor of 1719, at an elevation of at least 69 miles, was heard as "the report of a very great cannon, or broadside;" shook the windows, doors and houses, and threw a looking-glass out of its frame and broke it.

These heights are deduced by calculation from observations too unequivocal, and agreeing too well with each other, to allow of doubt. Scarcely less violent was the sound caused by the bursting of the meteor of July 17, 1771, near Paris; the height of which, at the moment of the explosion, is assigned by Le Roy, at about 25 miles. The report of a meteor, in 1756, threw down several chimnies at Aix in Provence, and was taken for an earthquake. These instances and others which might be adduced, are sufficient to show, that sound can be excited in, and conveyed by, air of an almost inconceivable tenuity; for such it must be at the heights here spoken of, provided the exciting cause be sufficiently powerful and extensive; neither of which qualities can be regarded as deficient in the case of fire balls, such as those of 1719, and 1783, the latter of which was half a mile in diameter, and moved at the rate of 20 miles in a second.—*Professor Pierce's Treatise on Sound.*

A FARM WANTED.

A practical farmer with a small family, competent to take entire charge of a respectable farming establishment, where the interest of the employer will be the main object, wishes a situation. One where improvement is the order of the day, would be preferred. For further particulars, inquire at this office. Location not particular.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

PHILADELPHIA, TENTH MONTH, 1842.

AGREEABLY to the notice given in our last number, the annual exhibition of the PENNSYLVANIA HORTICULTURAL SOCIETY, took place on the 21st, 22nd, and 23d ult., in the room formerly occupied by the Chinese museum in this city. This room, by the way, is more than one hundred and fifty feet long, with nearly half that width, and a ceiling proportionately high—affording ample space for the towering stalks and leaves of the *Urania Speciosa*, a Banana-like plant, forwarded by Richard S. Field, of Princeton, N. J., as well as for those of many other shrubs and plants of the largest class. The display of fruits and flowers, and vegetables common to the season, was surpassingly fine. The lover of rare and beautiful plants too, both indigenous and exotic, could hardly fail to have his broadest wishes gratified. The whole arrangements of the room, which, from end to end, and from side to side, was thoroughly occupied, did great credit, in our estimation, to the skill and judgment and good taste of those who planned and executed them. The continual bubbling of the classical fountain in the centre—the merry diving of the ducks in its basin, and the fine appearance of rare aquatic plants around its edge, presented a very agreeable and tasteful variety in this "wilderness of sweets." Trees loaded with oranges, lemons and pomegranates, presented themselves in abundance; and these, with many other tropical plants, showed by their luxuriance of foliage, how completely and delightfully the rigidness of our climate had been made to yield to the skill and carefulness of the amateur. The coffee tree, the tea plant, the mahogany tree, the live oak, the screw pine, and a variety of palms, were among those which particularly claimed our attention, and which are only to be found in the gardens of the curious. The Butterfly plant, *Oncidium papilio*, the Brazilian Birthwirt, *Aristolochia labiosa*, and the Pitcher plant. *Nepenthes distillatoria*, we have but rarely met with, and they again appeared to us, as they ever have, as samples of those sportive creations, in which nature occasionally delights to indulge. Scores and scores of the *Cactus*, too, were exhibited in every variety; they amused and delighted us, as a very child would have been amused and delighted, and we found ourselves loitering around them from day to day, almost by the hour.—Of all sizes and all shapes, and almost of no shape at all; we were detected laughing in our sleeve at the very idea of the quondary that father Euclid would have been in, if he had set about the task of reducing them within the rules of right lines, or curves. Their clumsiness and their beauty, their awkwardness and their primness, their hairiness and their baldness, the sparkling lustre of their apparently misplaced flower, and the repulsiveness of their thorn, presented altogether such a medley of contrarieties, that it seemed as if their individuality might have been acquired as Minerva acquired hers—through pain and suffering—and from the wreck of an originally beautiful design.

The appearance of the vegetables gave strong proof of the persuasive power of the cultivator, over the productions of our mother earth. Such cabbages, such potatoes, such beets, such egg plants and tomatoes, &c., &c., as were there, and made the very boards groan again, were calculated to light up the eye of the horticulturist, with the sparklings of an honest pride. And the Valparaiso squashes, and the pumpkins too—why, they were large enough to make a considerable item in the holiday dinner of a New England town. The melons were but indifferent, the season having proved unfavourable. The variety of apples too, was very limited. But the grapes and the peaches, and the pears, and the plums, and the quinces, did make the "mouth water." They were everything the most fastidious and ambitious of those who reared them, could wish. We had not supposed such grapes were growing in our vicinity, as were produced by Nicholas Biddle and Nathan Dunn.

Dahlias of every variety and the greatest richness of colouring, together with numerous bouquets, and fanciful designs formed of cut flowers, appropriate to the occasion, helped to give animation and interest to this general manifestation of nature's exuberance. We had almost forgotten to mention that numerous boxes of very fine honey were added to the collection, and gave beautiful proof of the care of the owner, as well as of the industry and skill of the little manufacturer.

A list of the premiums awarded, will be found in another column.

THROUGH the kindness of a friend, we have been furnished with a copy of an address delivered in the Fourth month last, at Washington, Mississippi, before the Agricultural, Horticultural, and Botanical Society of Jefferson college, by its president, B. L. C. Wailes. This Society was formed in 1839, and we are told, evidences are not wanting, that it has been instrumental in effecting a decided improvement in the condition of the country. Indeed, how should such evidences fail to appear, in a district possessing, as Adams county does, all the elements of Agricultural advancement, and with a Society in its midst, of more than one hundred and fifty enterprising individuals, who are well aware of the importance of cherishing those interests, in which it is acknowledged the real prosperity of the country lies. We have had abundant reason in times past, to congratulate ourselves upon the flourishing state of our commerce and manufactures: but we have also, at the same time, been sensible that these were eminently dependent upon agriculture. If we would give solidity and strength to the various departments of industry, we will find they must have their foundation upon a judicious culture of the soil. And how shall this object be so readily attained, as by spreading among those who cultivate it, the information necessary to enlighten them "upon all subjects connected with their business;" and thus enable them, by an economical application of labour and a prudent expenditure of money, to "accomplish the most successful results." We watch the efforts that are continually in operation among our Western friends, for the improvement of their lands and their individual condition, with a great deal of interest and satisfaction.

We notice that at the Fair which was held on the grounds of the President, R. Y. Wood received a premium for several bacon hams cured seventeen years ago, by Colonel James G. Wood, and which were now *perfectly sound and sweet.*

We are informed by the Delaware Republican, that the Fall exhibition of The Newcastle County Agricultural Society, took place about the middle of last month, as published in our last Number. It appears to have been attended with considerable interest, and the display to have been, for the most part, such as was anticipated. Samples of domestic manufacture, fruit, and pot plants, were no less attractive to the visitor, than were the varieties of live stock, which we suppose gave favourable evidence of the enterprise and judgment of the farmers of Delaware.

Six teams—four of horses, and two of oxen, entered the ploughing list. This, we should judge from the Report, was the most exciting part of the exhibition. The eighth of an acre, seventy-seven yards in length, and eight in width, was regularly measured off and allotted to each team. It was stipulated by the committee, that it be ploughed six inches deep, and within forty minutes. It was a green grass sod, that had lain about seven years, and was well calculated to test the merits and capacity of the plough, as well as to show the skill of the ploughman. Moore's—Moore & Wright's—Garrett's—Prouty's—Beach's, and Peacock's ploughs, were the competitors. The horse teams completed their work in nineteen and a half, twenty-one and a half, eighteen and a half, and eighteen minutes respectively: and the ox teams in twenty-eight, and twenty and a half minutes: the average time of the six teams being twenty-one minutes. The average rate of the teams, was about one acre of hard sod, six inches deep, in two hours and three quarters! The work was such as good farmers would be satisfied to have done on their own lands. The committee were not without difficulty in deciding the question to whom the premium should be awarded: but under all circumstances, it was given to Moore & Wright's horse team, with their plough. Had they been at liberty to award another premium, it would have been to C. P. Holcomb's ox team, with Prouty's plough.

It appears to us—and we have in our day, known something of the handling of a plough—as we suppose it did also to the committee, that the contest took too decidedly the character of a match against time. And we are aware of the difficulty of preventing it from assuming this character. The ploughman, however, should remember that the mere rapid running of the furrow, may afford but little test of the merits of a plough.

Since the communication on page 102, from J. P. was in type, an interesting letter from John Jones has been received, anticipating the inquiries of J. P. in relation to the "Foot prints, &c." It was of course, too late for this number. We shall in our next, avail ourselves of it, to throw more light upon this curious subject.

A communication from B. Webb, on the subject of Magnesian lime, has been received, but it came too late for this number.

The quantity of rain which fell during the Ninth month, (September,) 1842, was a little more than an inch and a quarter. .... 1.269 inches.

Pennsylvania Hospital, Tenth month 1st, 1842.

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Fine Wool.

The present tariff law will render necessary a greater regard to rearing a race of sheep that shall yield a larger quantity, as well as a superior quality of fine wool, especially for combing purposes. This end might be accomplished without in the least reducing the quantity of mutton, by crossing the pure Leicester, or Dishley ewe, with the Merino buck; and in this cross, it appears to me that we should unite all that is desirable, without incurring any of the difficulties and objections that have arisen in the attempt to obtain fine wool by a mixture of long and short—as between the Southdown and Leicester. And my opinion has been materially strengthened, by a conversation on the subject with one of the most influential of our wool merchants, whom I lately met on his return from a tour of observation through the Western territory, with the view of ascertaining what was the quantity of fine wool on hand, on the eve of the expected passage of the tariff bill. He fully agreed with me, that the cross of the *long* wool on the *short*, or *vice versa*, had not been found to answer expectation, the produce being neither long nor short, and by no means suitable, either for combing or clothing wool. This gentleman is also a breeder of sheep to a considerable extent, and was very sensibly interested by my observing, that the plan for improving any breed of animals, was to begin with *dam the best*, and which, for the purpose here contemplated, would prove of the highest importance, as the object should also be, to improve the size of the sheep and the quality of the meat; for it is evident that mutton is beginning to command regard in our markets, and will become a staple article in the consumption of flesh meats. With this view it was, that I advocated the cross of the largest and best bred Leicester ewes with the Merino buck; remarking, that the progeny would be large and well formed, owing to the large capacity of the dam, as well as the power of supporting its young after parturition; and prove a security from danger at that particular time, when accidents are continually occurring from a reversal of this rule, namely: that of crossing a small female with a large male; in all which he fully concurred, and mentioned, as corroborative of the fact, instances that had lately come to his knowledge, where the produce between a large heavy horse and half-bred mares, had turned out the most ill-formed objects; the want of capacity in the dam, compelling the fetus to extend itself in the length of the legs, &c., so that when it came into the world, which it always did at the imminent peril of the life of its parent, and often with its sacrifice, it was found to be any thing but what had been expected from such an union. And this observation reminded me of a stable of large Flemish mares, which I had known kept on an extensive estate in France, mainly for the purpose of rearing carriage horses of superlative strength and beauty, by a cross with the stoutest thorough bred horse that could be obtained; by which means the finest animals of 16 or 17 hands in height, had been obtained; perfect models for the painter, and commanding almost any price in the market.

In No. 2, Vol. VII. of the Cabinet, I observe the portrait of the Cheviot ewe, from "Low's Illustrations." Having myself formerly been much concerned with this particular breed of sheep, I am free to confess that the likeness is not good; the head, although not fine and small in the Cheviot, is not so large as is there depicted, neither are the legs and feet naturally so large as those of a calf, as they there appear; but this is not the fault of the engraver; the animal is faithfully done from Low's work, but the drawings, in many instances, are faulty in this particular, although most beautifully engraved and ornamented. But I would say of this variety of sheep, they are valuable, only in peculiar situations, where finer breeds could not subsist. Their fleece is coarse and inferior, small, light in weight and value; while their meat is not first rate; but on their own native hills, and on other mountainous districts, they have well nigh supplanted the original Heath breed: being as hardy as they, larger in the carcass, and coming to maturity earlier: a desirable sheep for Scotland, but by no means so for America. We owe, however, thanks to the Cabinet, for bringing us acquainted with a race of sheep, which are at present commanding very great attention in many parts of Europe, but of which, little before had been known in this country.

But the cross which I advocate, namely, the pure Merino on the thorough bred Leicester, or Bakewell, or Dishley, would form a breed of sheep worthy our care and attention; and I expect to see them introduced, not only into our sheep-breeding districts, but also upon our farms, as part of our general stock; where they would be found a valuable variety, and be the means of conducing much to our convenience and profit, in the regular supply of our tables with an agreeable and particularly wholesome food, besides furnishing a lamb and fleece every year in payment of their keep—the manure of a well regulated flock defraying, most amply, all expense of care and attendance. I am at present turning down a clover-lay of 16 acres, for wheat, the land being full of natural grass; now, I am confident that a flock of 50 such sheep, could have been kept upon this herbage to far greater profit to the wheat, than it will obtain from the green crop turned in; I greatly prefer passing such crops through the bowels of animals, to burying them; and it will not readily be believed, how far the *pickings* of our fields would go to the support of such a flock through the year. An objection to the keeping of sheep is urged, in the fear that they would be worried by dogs; but if a bell be attached to the neck of every fifth sheep in the flock, there would be no danger of that kind. Their night-fold, if properly covered from time to time, with dry muck or fresh mould, would be found to yield a large quantity of the very best compost, for dressing young clover in the spring, of far more value than the cost of attendance; and this system is carried out on a large scale by Major Reybold, of Delaware, at whose farm, on my last visit, I saw a mine of wealth in the cleaning of his sheep-fold, all ready for carrying abroad. If persons would attend to their flocks of sheep, and consider them as part of their farm stock; not expecting them to subsist without a regular supply of food and care, any more than they do their horses, cows and hogs, I have yet to learn why they could not be made to pay as well —nay, better than they. And I would ask of my brother farmers, if there be any reason why we should not, each of us, keep a flock of fatting sheep for the regular supply of our tables with fresh mutton? I am satisfied, the change which it would make in our food, would be conducive to health and vigor of constitution, and be found as cheap as any other; particularly if we were to adopt the European plan, of making soup of a large portion of the carcass, which, if properly cooked, with plenty of vegetables, would form a most delicious meal at the supper table, particularly in the season of winter.

To me, it appears very evident that the time is approaching, when we shall all think more of keeping sheep, and less of rearing cattle for beef; the Western country people having it in their power to *deluge* the Eastern States and sea-board, with droves of the finest animals; by far cheaper than they can be reared and fed amongst us. Sheep *work* well, too, with the dairy; and both together, would form a far more profitable, as well as more convenient stock for this part of the country, than rearing calves and fatting oxen. In conclusion it may be remarked, the wool of the Southdown breed of sheep, is too coarse for fine clothing, and not sufficiently long in the staple for combing: the wool of the Leicester sheep is too coarse for good combing, while the carcass of the Merino—bearing the kind of wool which is in request—is too small and ill-formed, to satisfy our present views and wants. The union of the Merino with the Southdown, would give wool of inferior value, ranking under neither combing nor clothing; while a cross with the Leicester or Dishley, would add exceedingly to the size and value of the carcass; produce a wool decidedly long and suitable for combing, greatly improved in quality and increased in quantity, and furnishing us with a supply *at home*, of that kind of wool, which will now be so much in request; our country affording the means of increasing our flocks to any, even to a boundless extent. Z.

Bucks County, Sept. 24th, 1842.

Mr. Hidley, of Greenbush, N. Y., has this season had, from a single kernel or grain of rye, 78 stalks, well filled; and on counting the grains in one of the heads, of a medium size, or about a fair average, he computed the whole number of kernels in the 78 heads to be about 5000, or about 60 kernels to a head. This is the most remarkable instance of increase that we ever heard of—5000 for *one!*

The Provision Trade.

We make the following extracts from the circular of a highly respectable house in Liverpool. They cannot fail to interest those of our readers who deal in the articles spoken of. When a little extra care will ensure a ready market and a fair price, it is certainly bad economy, to sacrifice to carelessness and inattention, the conveniences of the one, and the profits of the other. We learn that one of the partners of this house, has been extensively through the United States and Canada with particular reference to this subject.
Ed.

Our new tariff being so favourable to the introduction of American provisions into England, that we have the prospect of an extensive and steady import of various articles of produce from thence, we would throw out, for the guidance of those who contemplate engaging in the preparation of provisions for our market, some suggestions which we conceive to be important, and a compliance with which will operate favourably to the interests of those engaged in the trade. We are aware that the shipment of beef and pork to England, this year, has turned out a very unprofitable operation, and in consequence, many persons feel discouraged from prosecuting the trade, having got the impression that a prejudice exists in this country against American provisions. Such is not the case however. It is true that those articles have been almost unsaleable in our market, but the reason is found in the fact of their entire want of adaptation to our tastes, and their general inferiority to what we have been in the habit of receiving from Ireland and Hamburg. Of this inferiority there is sufficient evidence in the fact, that, while Irish pork has been selling freely at 70s. a 75s., the American has been with difficulty disposed of at a price equal to 48s. duty paid.

This inferiority as regards pork, arises principally from the hogs being generally fed on beach nuts, or other wild feeding, which makes the meat soft and oily; but it is partly owing also to the hurried way in which provisions have been cured and packed, especially in the Western country, and to the use of an inferior salt, quite unsuitable to the purpose. We would urge strongly on shippers, the propriety of bestowing more care on the selection and preparation of pork for our market in future, as a soft and inferior article is almost unsaleable with us, and the shipment of such will be certainly productive of loss to the owner. These remarks apply with equal force to beef, which has been inferior, not only in consequence of insufficient fattening, but also from being very roughly handled. The form too, in which both articles have been cut, has tended to occasion this depreciation in our market, and although it may not appear of sufficient consequence to affect their value, yet taking into consideration that our buyers have been accustomed to a certain cut for many years, it is reasonable that their tastes should be consulted. Of one thing we feel assured, that shippers will find it to their advantage to fall in with the requirements of our market.

Fine leaf lard, if unmixed and well managed, will, we think, be a profitable article of shipment. It is put up in neat white hooped kegs, containing about 40 lbs. each. The lard is poured into the kegs at the head, and so soon as it has cooled and settled down, the surface is made level and covered with white paper, which prevents it from adhering to the lid when opened for inspection in our market. It is also put up to a considerable extent in bladders, and shipped in hogsheads, packed with bran or cut straw. It is important that the bladders should be well cleansed by scraping and the use of acids, so that they may be tolerably transparent. The inferior lard may be put up in packages of any size, which, when large, should be iron hooped.

By the subjoined extract from the tariff, it will be seen that the different duties in favour of colonial produce are so great, as to give a decided advantage to Canada, in the shipment of all provisions for our home consumption. Lard is admitted on favourable terms, and as our demand for that article for machinery manufacturing purposes is very large, we would strongly recommend that the soft pork should be melted down and shipped in that form.

The high duty on foreign butter being retained, will prevent any regular trade in that article from America, except when prices are so low as to make it an object of attention for shipment, as grease; under this name, it is liable to a duty of 1s. 8d. per cwt. only. In Canada the soil appears to be very favourable for the production of this article, and under the present modified colonial duty, it will become, we think, one of very large export. The principal fault in Canadian butter at present, is, that the milk is not sufficiently pressed out, and consequently, when shipped on a long voyage, it becomes rancid before it can be consumed. It should be packed in casks containing from 70 to 80 lbs., which must be air tight.

Cheese has already been shipped extensively, and as the quantity produced is increasing every year, it is likely to become an item of considerable trade. This article has been shipped heretofore without much judgment being exercised in the selection or assortment of the qualities, which has prevented the returns being so satisfactory as they otherwise would have been. American cheese is for the most part insufficiently pressed, which gives it, when cut, a porous, or honeycomb appearance: it is also unpleasant in flavour, owing to the too free use of runnet. The removal of these faults would very much enhance its value in the English market.

With respect to grain and flour, it will be understood that the new corn bill has placed the trade on a much more safe and steady footing, though there will always be uncertainty while the principle of the sliding scale of duties is preserved.

We have expressed our belief, that under the existing tariff, a large trade in produce will arise, but when we look at the rapid progress of free trade principles in Britain, and the urgency of the popular demand for cheap provisions, we may safely predict a much more extended trade within a few years, in consequence of the still further modification of our provision laws.

J. & C. Kirkpatrick,
Produce Commission merchants.

Present duties.		*Foreign.*	*Colonial.*
Bacon,	per cwt.	£0 14 0	£0 3 6
Beef, fresh or salted,	"	0 8 0	0 2 0
Butter,	"	1 0 0	0 5 0
" as grease,	"	0 1 8	0 0 3
Cheese,	"	0 10 6	0 2 6
Hams,	"	0 14 0	0 3 6
Lard,	"	0 2 0	0 0 6
Pork,	"	0 8 0	0 2 0
Tongues,	"	0 10 0	0 2 6

Five per cent. extra, is payable on the amount of the above duties.

Liverpool, Sept. 1st, 1842.

Health.—A great number of diseases arise from checked perspiration, and might be prevented by timely care. If a person perspiring freely, gets wet or stands in a draught of cold air, or lies down on the damp ground, or drinks cold water, he runs a great risk of seriously injuring his health; and the more relaxed and weaker he is from his work, the greater is the danger. When wet he should keep moving about briskly, and never sit in his damp clothes if he can help it. The sooner a person gets into a perspiration after feeling the least unwell from its being checked, the more certain will he be of avoiding a cold or fever. A good way to induce perspiration is to rub the body with a coarse towel before a fire.—*Selected.*

Belgian Husbandry.

In no part of the world has the cultivation of the soil attained greater perfection, than in Belgium; and the numbers of a work devoted to a description of the husbandry of that country, and the manner in which, by persevering industry, its barren sands have been converted into the most fertile of soils, are not the least valuable of the series published by the London Society.

Farmers in this country, speak of the impolicy of extensive outlays in improving their farms; "It will not pay the expense," is the objection most frequently made, and one which is the most forcible, in reply to those who urge upon them systems, for the permanent melioration of their soils. We have sometimes been disposed to consider this feeling of regard to immediate expense or profit, more as the natural result of that restlessness of character, which is said to belong to us as a people, and which leads us to suppose, with reason, that what will not pay *now*, may be lost to us *for ever*, as from our known migratory propensities, it is scarcely probable our lands will remain in our hands, or those of our children, for any considerable time, rather than of any disinclination to encounter the labour which an improved husbandry requires. The benefits of a good system of farming, or the evils of a defective one, can only be fully seen and appreciated in a considerable term of years; on such lands as the greater part of those in this country are, when brought under cultivation, what may be called the *skinning, or scourging system*, in which, repeated crops, with little labour and no manuring, are taken off, may be the most profitable for the time, although fatal to the soil and the prosperity of the farmer in the long run; but when the permanent value and productiveness of lands are taken into consideration—when it is remembered that it is much easier to keep lands in heart, than to restore them when reduced to sterility; and that the eventual agricultural prosperity of a country is depending on a correct system of management, the importance of selecting the best models, and conducting our farming operations with reference to future results, as well as present profits, becomes perfectly evident.

To illustrate the effects of the two systems of farming, or rather, to show the results of the improved one, as compared with that generally practised with us, we give a few extracts from the papers on Belgian farming; and the first is a description of a farm of one hundred and forty acres, on the river Lys, near Courtnay.

"Of this farm, near twenty acres are in fine meadows along the river, occasionally flooded in winter, but not irrigated. About ten acres are rich, heavy land, adjoining the meadows, in which beans and wheat thrive well: all the remainder, about one hundred and six acres, lies in an oblong form, bounded by a hedge-row; at one corner of which, nearest the river, stand the farm buildings. A road or path, six feet wide, runs through the middle of the field, and the road or path that leads to the farm-yard, skirts one end of it. The soil of this large field, is a rich, light loam, which lies over a substratum of clay, but at such a depth as to be perfectly sound and dry: it is not very fertile in its own nature, but has been rendered so by many years of an improving husbandry: every part of the land has been repeatedly trenched and stirred *two or three feet deep*, and the immense quantity of manure, chiefly liquid, put on year after year, has converted the whole into a rich mould; the strength and vigour of the crops bear witness to the goodness of the husbandry.

"As we walked along the path, which is just wide enough to admit the wheels of a cart, the whole produce might be seen at once. The flax had been pulled, and remained stacked on the ground; the colza (cole, or rape seed,) had been beaten out, but the stems remained where they had been cut; there were fifteen acres of most beautiful flax, of a bright straw colour, and the stems a yard long; this, besides the seed, was worth in the stack, from twenty-five to thirty pounds sterling, per acre; twelve acres of colza had produced about four hundred bushels of seed; eighteen acres of oats looked so promising, that they could not be set at less than seventy bushels per acre; eighteen acres of wheat, which stood well, with short, plump ears, were estimated at forty bushels per acre: eighteen acres of rye, with straw six feet high, would probably produce rather more than the wheat. There were six acres of white poppy, of which every plant was strong and upright, and the produce of which was estimated from twenty to twenty-three bushels of seed per acre; six acres were in potatoes, expected to produce at least twenty-two hundred bushels; about an acre was in carrots, which looked fine and large; twelve acres were in clover, nearly the whole of which was cut green, as food for horses and cows, and produced three good cuts in a year; the ten acres of heavy land were partly in beans, and partly in wheat; and the stock kept on this farm, consisted of twenty-seven cows in milk, five or six heifers, nine horses and three colts."

It cannot fail to strike the most inattentive reader, that the crop of this one hundred and twenty acres arable, greatly exceeds, perhaps doubles, that of our ordinary farms of the same size; while on many of what are called our *dairy farms*, of about the same size, not more stock is kept than on this *grain farm. Manuring and deep tillage* have done this for the Brabant farm, and it will do the same for any, or almost any, on which it is adopted. We are convinced that money expended in converting land into rich garden mould, is well applied, although for the moment, it may seem to be thrown away, particularly on lands, the owners of which are expecting to get to the far West, by "year after next, at furthest." We add a description of the tillage culture of another farm of about four hundred acres, of naturally first rate land, but which, by being treated as described, is so much deteriorated, that the crops rarely more than half equal those on the same number of acres on the one just noticed.

"The rotation on this farm, is as follows: 1, fallow; 2, winter barley; 3, beans; 4, barley, or wheat; 5, beans, clover, potatoes; 6, wheat; 7, oats. Thirty cart loads per acre, of long manure, the straw not much decomposed, are put on the fallows before the last ploughing, and the winter barley is sown in October; the produce being eight quarters, or sixty-four bushels per acre. Wheat, on the same preparation, gives from thirty-two to forty bushels per acre, so the barley gives the largest crop, and with the least exhaustion to the soil; every year a portion of the pasture is broken up and planted with colza. The natural fertility of the soil is shown by the succession of crops produced on the newly broken up land, without manure, viz.: colza, wheat, beans, barley, beans, wheat, clover, wheat, beans, oats; but after this *scourging*, no wonder the land needs *rest;* and this is given without much care, by merely allowing the natural grasses to spring up, without the trouble of sowing the seeds: it takes, however, three years before there is any tolerable pasture, but as it remains nearly twenty years before it is again broken up, the deterioration is not so apparent; but under a regular and judicious course of husbandry, this land might be kept up to the highest state of fertility, and the ultimate profit would be much greater."

This is a picture of the farming so prevalent *in this country*, and which is fast lessening our products and ruining our lands: it may be fairly called the *exhausting process*, as the whole object seems to be, to get as *much* from the earth, and return to it as *little* as possible. By the first mode of farming, the land improves constantly, growing more productive, and of course more valuable: a farm cultivated in this way, by deep tillage, thorough management, and a well conducted rotation, becomes in time, a rich mould to the depth to which the soil is stirred, and the roots of plants, having thus ample room for range and pasturage, the crops are invariably good; and thus the labour and expense is repaid, and a soil is formed, far superior to the richest native earths, and which can then easily be kept in condition to give the most ample crops.

Cultivator.

For the Farmers' Cabinet.

The Crops and the Prices.

In almost every newspaper that meets my eye, I notice accounts of the extraordinary crops of wheat, which have this season been harvested throughout the whole country. From these statements, a stranger to the facts might be led to suppose, that this abundance is so great and so universal, that a seven years' famine could not exhaust it.

Whether these misrepresentations,—so widely circulated,—originated in ignorance or design, it is needless to inquire, and useless to know, any further than to place farmers on their guard against the consequences of such an erroneous impression.

So wholly groundless are these reports, and so wide of the truth, that instead of a large excess beyond a usual crop, the yield, in grain, will not equal the average produce of the last three years, by a large amount, while the quantity of straw is great, almost beyond precedent. To this last circumstance may be clearly traced the mistaken opinions of many persons, unskilled in the art and mystery of agriculture, who, in passing through the country, are deceived by appearances, and promptly conclude, on observing a large bulk of straw, that the quantity of grain must also be large in proportion. This is by no means, a sure criterion by which to judge, and as applied to the present crop, is certainly very fallacious.

Many farmers in this State, and in New Jersey, complain, that upon threshing their wheat, they obtain but little more than one half the usual quantity of grain, from a given number of sheaves, and that of inferior quality. This, it is presumed, has been occasioned by the rust, which, from accounts, has prevailed this season in every section of the Union, and must prove injurious to the wheat crop generally;—that however, which was sown very early, it is discovered, has suffered least.

Several of our country millers having discovered this failure in the wheat crop, have already repaired to the cities, and taking advantage of the present overflow of the markets, and the consequent depression of prices, have laid in a large supply, to guard against the deficiency which they foresee will occur before the next harvest. It may be inquired, how it happens, if the wheat crop throughout, is so ordinary and so much less than usual, that the supply is already equal to, or greater than the demand? I answer, one cause may be traced to the mistaken opinions of many farmers, who have been led by false reports to believe that there is a superabundance of grain in the country, and conclude that prices will decline as soon as the present want is satisfied. This groundless fear has caused a rush into the markets, and has in a measure produced the very evil that was apprehended. Another cause may be discovered in the want of barns and shelters, in which to store away their grain in the straw, that many farmers in new settlements experience, and who, to prevent loss or accident, conclude it to be safest to thresh it in the field, and sell it immediately. Another cause, and perhaps the most prominent and general, is the indebtedness of many, which obliges them, even at a great inconvenience and a heavy sacrifice, to thresh their wheat directly after harvest, and convert it into money as soon as possible.

These, with several other causes that might be specified, have occasioned this premature flood of grain in the markets, and the consequent decline in prices. P. W.

Rural Retreat, Northampton County,
Pa., Sept. 6th, 1842.

Good Tillage.—The ancient husbandmen used top dressings of hot manures, such as pigeons' dung powdered, which was put in with the hoe. In the practical operations of agriculture, when we take into account the simple mechanism they employed, they were by no means contemptible: thus Pliny tells us, they were particularly careful in ploughing, endeavouring to have perfectly straight and even furrows. They ploughed the land three times over, always before sowing; sometimes taking a furrow nine inches deep, and sometimes only three, while on heavy soils, nine ploughings were frequently given, making a fallow every other, or alternate year. Indeed, it would appear that the advantage arising to vegetation from the soil being well pulverized, was well known; for Cato being asked, "What is good tillage?" answered, "To plough." "What is next?" "To plough; the third to manure; the remainder is to sow plentifully, to choose the seed carefully, and to eradicate the weeds." Hannam.

From the National Intelligencer.

The Polar Plant of the Western Prairies--a Vegetable Compass.

Washington, August 9th, 1842.

Dear Sir,—In offering through you to the National Institution, a dry-pressed specimen of the *Polar Plant of the Western prairies*, it is proper that I should give a description of it and of its location. It is a species of fern, with one large flat leaf, *whose plane always points to the north and south.* The leaf is symmetrically disposed about the stalk. It attains the height of from 10 to 16 inches, and it is believed that it never blossoms. It is spread profusely in large beds over all the Western prairies, from the far north-west to the far south-west. It has been seen in the prairies of Wisconsin and other regions east of the Mississippi. It is never found in the forests; or, in other words, out of the prairies. It has been well known to the hunters and trappers of the West, and to the officers of dragoons; but I believe that its existence has never (at least extensively) been made known to the world. Its plane is always in the plane of the meridian, when not disturbed by high winds or other external causes. The indications are always most accurate in the valleys, where the beds are sheltered from the winds, and where the traveller finds them arranged in parallel positions, faithfully pointing out the direction of the meridian. The leaf is symmetrical, and thus there is nothing in its indications to distinguish the north from the south.

The specimen which I send, was plucked from the prairies near Fort Gibson, west of Arkansas.

That its indications are actually the same wherever found, is the universal testimony of all who have known of it; and I have met many who have noticed it from south of Fort Towson to a considerable distance north of Fort Leavenworth. In many instances, those who spoke of it derived their first intimation of its existence from that excellent officer and capital woodsman, Captain Nathan Boone, of the first regiment U. S. Dragoons, son of the celebrated Daniel Boone.

The cause of the polarity of this curious plant, yet remains to be discovered. Being symmetrical in shape, or rather the weight being equally distributed about the stem, it is possible that its sap or fibre is so thoroughly impregnated with certain salts of iron, as to be deviated, from the period of its infant growth, by the action of the magnetism of the earth, turning like a compass needle on its stem or root, as a pivot. That it is not caused by the action of light, would seem probable from analogy, as vegetables acted upon by light, are noted for turning their leaves or blossoms towards the sun, instead of from it. At mid-day, the plane of the Polar plant passes through the sun, and thus it shuns the light. I have noticed it in long-continued cloudy weather, and could find no alteration in its position.

As the existence of the torpedo and the electrical eel exhibited the influence of electricity on animal life, this plant is very interesting as showing its probable connexion also with vegetable life; thus furnishing a link to supply the chain of gradation. It is well known that there are many distinguished naturalists and professors of physiology, who would go higher still, even to the human frame, and predict the final discovery of the intimate connexion between electricity and the operation of the nervous system. Any fact connected with the action of electricity or magnetism, (supposed to be one and the same agent,) is now especially interesting, when there are so many ingenious minds throughout the world, devoted to such investigations.

I have ascertained, to my satisfaction, that this plant has been well known to trappers and to many of the Indian tribes, and that they have been in the habit of availing themselves (in their tours over those vast tracts) of this humble but omnipresent guide, which a kind Providence has sprinkled over that region, and which is thus available in cloudy weather, when the sun and stars are denied them. Even if it is granted that it is less needed by the red man, no one will deny its uses to the whites, in a country destined still for a long period, to be roamed by hunters, traders, pioneers, and other white men.

I will here add, that Captain Boone also states, that there is spread all over the far West, a certain root, called the "snake root," whose juices are very grateful to quench thirst, and which is found in the greatest abundance in those parts of the prairies which are high or dry, and most likely to be deprived of water in a season of heat and long drought.

It is needless to descant upon these beautiful and striking examples of the wise provision of *Nature*, furnishing a vegetable compass and the means of quenching thirst, ever ready for the wanderer, and both located in a region destined, perhaps, for the longest period in the history of the world, to be occupied by a roving population.

I am, with high respect,
Your obedient servant,
Benjamin Alvord,
Lieutenant U. S. Army.

To F. Markoe, Jr., Esq.,
Cor. Sec. National Institution.

From the Maine Cultivator.

Butter making in New York.

Mr. Editor,—Business led me to visit Goshen and Minisink, Orange county, N. Y., in my late journey to that State, and knowing that it was noted through the Union, as a superior butter making country, I determined to learn every part of the process. I was surprised to find that after the milk is strained, every part of the process differs from ours.

The milk is strained in pans, or oaken tubs, holding two pails full. Every thing is done in the cellar. The milk is not meddled with until it *coagulates*, when each day's, or each half day's milk is put in the churn with nearly an equal quantity of cold water in summer, and warm water in autumn or winter, to bring it to the proper temperature, which is from 55 to 66 degrees of Fahrenheit.

The churn is made in the barrel form, of oak, hooped with iron, with a wooden hoop three inches wide at top, in which the cover rests. For 6 to 10 cows, the churn should hold 30 gallons, and in that proportion for a larger number. I believe they rarely exceed two barrels, as in large dairies they prefer to churn several times a day, to the use of larger vessels.

Churning is never done by hand, except for a single cow. In small dairies it is done by a dog or sheep, on an inclined wheel, propelling the dash by very simple gearing. Those larger, have horse, or water power. The motion can be communicated to the shaft and arm, elevating and depressing the dash a convenient distance from the moving power, by two wires. For a dog or a sheep, (the latter is preferred, both from economy and efficiency,) a wheel 8 feet in diameter, is inclined about 22° with the horizon, on which the animal is placed, having cleats nailed on to prevent his slipping. No other harness is required than a strap around the neck. His weight is sufficient to move the machine. On the upper side of this wheel is fastened a cast iron cog wheel, or circular racket, 3 feet in diameter, which carries a pinion and crank. The wheel is often out door—sometimes in the cellar. It may be in a barn or shed, and the motion communicated by wires, as before stated.

When the butter begins to curdle, as it is called, all is washed down with another pail of water, and the motion continued till the butter gathers. Let it be remembered *the butter is never touched with the hands.* All is done with a short ladle, the blade of which resembles in shape the clam shell, and is five inches across at the end. The handle about five inches long.

The ladle and tray are always kept filled with cold water, when out of use, to prevent the butter from sticking to them.

The butter is worked and salted with the ladle in a tray. When it has stood long enough to become firm, after salting, all the buttermilk is worked out, and it is packed down solid in tubs of 40, or firkins of 80 lbs. If it cannot be made solid by the ladle, a pounder is used. When one churning is put down, a cloth is put on, covered with salt. This is taken off at each addition and replaced, until the tub, or firkin, is almost full, when half an inch of strong brine is poured over the cloth. Salt is never left between the layers.

They prefer *blown* to *ground* salt, because it is finer, and diffuses itself sooner and more perfectly through the mass; it requires a greater measure, but the same weight.

A churn used daily, is cleansed twice a week. The tubs are prepared of oak or ash, and when wet, rubbed thoroughly with as much fine salt as will stick on the inside.

Butter thus made and cured, will keep for years in a cool place, and sells on an average, fifty per cent. higher than butter made in the usual way in our State.

Cows average from 150 to 200 pounds a year, and the buttermilk is estimated to make 100 pounds of pork, which, when it brought 10 cents, paid all expenses of making the butter—*now*, only half.

Some churn over the buttermilk after standing one day and pouring off the water. One man who had ten cows, told me he made all the butter used in his family, in this way, and had 20 lbs. on hand.

Yours, truly,

James Bates.

Norridgewock, Sept. 20th, 1840.

The Earth is Beautiful.

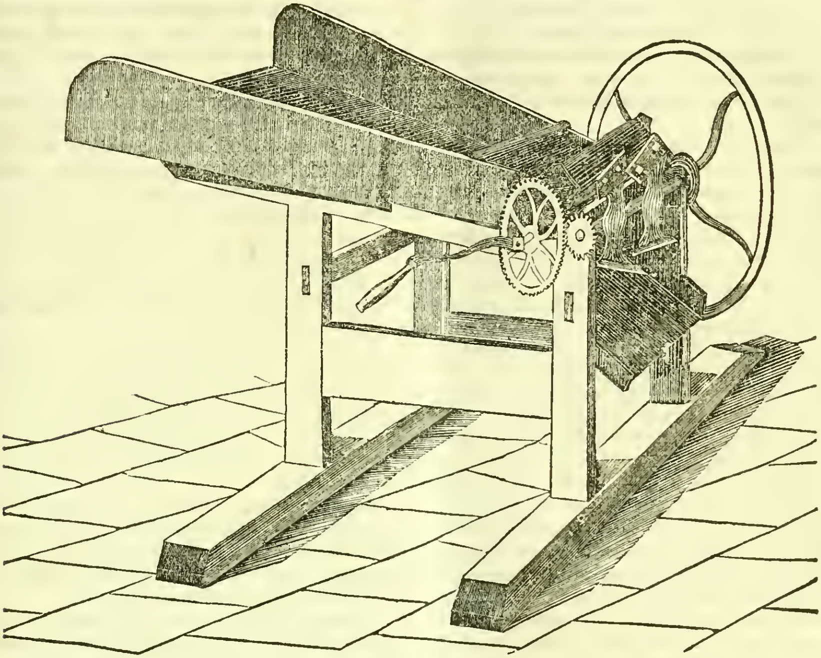
The whole broad earth is beautiful,
To minds attuned aright,
And wheresoe'er my feet are turned,
A smile has met my sight.

The city with its bustling walks,
Its splendor, wealth and power,
A ramble by the river side,
A passing summer flower;

The meadow green, the ocean swell,
The forest waving free,
Are gifts of God, and speak in tones
Of kindliness to me.

And oh! where e'er my lot is cast,
Where e'er my footsteps roam,
If those I love are near to me,
That spot is still my home.

Caroline Gilman.



THE VIRGINIA CHAFF OR STRAW CUTTER.

The above cut represents the *Straw or Chaff Cutter*, invented by the talented editor of "The Southern Planter," C. T. Botts, Esq., which obtained the first Premium at the late Exhibition of the Philadelphia Agricultural Society. The mode of its operation is simple and efficient, and its performance was admitted to be superior; cutting the straw of a proper length for feed, and making clean work. A description of this valuable addition to our Agricultural Implements, is given in a late Number of "The Southern Planter," published at Richmond, Virginia,—which work we strongly recommend to the notice of our readers; and from thence we copy the following remarks:

"The Inventor had been long ago satisfied, that the qualities required in a Straw Cutter, were simplicity and durability. Many Cutters whilst in order, are sufficiently effective; but from the failure to bring them within the power of common management, they have generally been abandoned for the imperfect Cutters made by the common black-smiths of the country. Keeping this fact in view, and deeming it unimportant whether it required one minute or two to cut a bushel of straw, the Inventor applied himself to the construction of a knife, which, if less rapid in execution, would be more durable, and within the control of the simplest capacity. This he found no easy task; but after years of thought and trial, he flatters himself, that he has more than accomplished the end;—for while the knife is perfect in simplicity and ease of management, its efficiency is not inferior to that of any other in use. And while others were satisfied with the knife as it was made twelve months ago, the Proprietor was not;—he has finally succeeded in rendering it still more simple; and it is now offered to the public without fear of competition. The nature of this last improvement consists chiefly, in shortening the knives, as represented in the engraving; they are now not wider, and are as easily ground and set, as a plane-iron; and, except to turn the crank, that is all the operator has to do, from one year's end to another.

These Cutters are made up in the most perfect and substantial manner, and are offered at prices as low as can be afforded—regard being had to substance and durability in the machine. The largest size is sold at $30;—the smaller size, rather lighter, and of a somewhat different construction, $25."

Application may be made to the Proprietors, Messrs. Botts & Burfoot, Richmond, Virginia,—or to Landreth & Munns, at their Agricultural and Horticultural Warehouse, No. 65 Chesnut Street, Philadelphia.—Ed.

For the Farmers' Cabinet.

Magnesian Lime.

I agree with S. Lewis that we have had "namby pamby essays and absurd opinions enough on this subject," and he might have added, on others.

If the question is further discussed it will be necessary to come to the point, or at least to a right understanding of what the subject in dispute is.

In the first place, it is not necessary to enter into a controversy about the private business of correspondents; let them buy lime, or sell it, as best suits the interests and feelings of themselves and others. The public want to know the relative value of magnesian lime and pure lime; they know that lime with all its impurities, will improve the soil, but the question is now raised upon the value of the impurities—whether magnesia, for instance, as one of those substances, is better to be retained or rejected, when lime is bought for the purpose of manuring land. As to lime, we all agree about its qualities as a manure, no one even insinuates that pure lime is injurious to the growth of plants, but on the contrary, highly beneficial, and in some cases absolutely necessary to their full developement. It follows then, as a matter of course, that magnesia is the subject in dispute.

Is magnesia injurious? is it useful? and if useful, is it equal to lime, used separately or combined; or does it occupy a neutral position, when applied as a manure or food for plants?

These are the plain and obvious questions presented to us by the nature of the case, and if we wish the discussion terminated in a way that will be profitable to the agricultural interests of the community, we must enter into a candid and dispassionate investigation of all the circumstances, experiments and facts, that bear upon the subject, and then submit to the truth, whatever it may be.

For my own part, I confess myself ignorant of the effects of magnesia as a manure, when applied separately to the soil;—never having seen it tried. My strong objections to it, have grown out of using it in combination with lime, or in other words, using magnesian lime, and comparing the effects with those produced by pure lime.

The first great and prominent feature of difference between pure lime and magnesian lime, is that the former may be used at the rate of five and six hundred bushels to the acre with great benefit; while the latter, if spread on the land at the same rate, would render it totally barren.

We know that great crops of wheat can be raised without magnesia being applied as a manure, as in England for instance, and we know where it is applied, the crop is very uncertain.

South-eastern Pennsylvania is an example of the latter—there, large quantities of magnesia have been applied to the soil, and for some reason, great crops of wheat cannot be raised, as a general result. There is a secret and efficient cause of failure somewhere in the wheat crop of that district, that baffles the ingenuity and research of a class of farmers, who for intelligence and enterprise, are not behind those of England, or any other country.

I do not say that the application of magnesian lime to the soil is the cause of this failure, but there are some good reasons for believing, that the large quantities of it spread upon the land every year with the lime, exercises an unhealthy influence, both upon vegetable and animal life.

From observation and experiments I have long been satisfied, that much larger crops of wheat can be raised under the same management in Maryland and Delaware, than in Chester and Lancaster counties.

I have never been able to account for this difference, yet I am satisfied that it exists. I am aware that the growth of wheat is influenced by peculiarities of soil, but it is not believed that Maryland and Delaware have any advantages over Pennsylvania in that particular.

One thing we know, that magnesian lime is a recent affair amongst us; previous to opening the Schuylkill navigation it was rarely used as a manure, and the heaviest crops of wheat I have known, were raised before it was introduced.

In the years 1813–14, a considerable interest was excited on the subject of agriculture in Delaware. The war with England had changed the position of trade, flour advanced to ten and twelve dollars per barrel, and other produce in proportion. This excitement brought out some heavy crops of grain. One field near Wilmington, produced 50 bushels of wheat to the acre, at least I was so informed by a person worthy of every degree of confidence. I raised 40 bushels to the acre, on a small field that had been ploughed deep, highly manured with compost, and previously dressed with pure lime. I recollect one other case, where the yield was 40 bushels to the acre; and several instances between 30 and 40 bushels.

Since the establishment of the Agricultural Society of Newcastle county, there has been considerable emulation among the farmers in their grain crops and the rearing of fine cattle; yet with all the advantages of an improved system of agriculture, the brag crops do not appear to have been increased, or those of former years even equalled, since the introduction of magnesian lime; but the general effect has been similar to that produced in South-eastern Pennsylvania; the facility with which the lime can be procured, gives it a general introduction into every part of the State. Magnesian lime is enriching the soil, because the good effects of the lime more than counteract the bad effects of the magnesia.

According to the analysis of Posselt and Reiman, "10,000 parts of the leaves of the tobacco plant contain 16 parts of phosphate of lime, 8.8 parts of silica, and no magnesia; while an equal quantity of wheat straw contains 47.3 parts, and the same quantity of the grain of wheat, 99.45 parts of phosphate."

These experiments upon tobacco and wheat, throw some light on the subject in dispute.

It is well known that tobacco is one of the greatest impoverishers of the soil of any plant we raise; whole districts of the most fertile land in the country have been rendered totally barren by its cultivation.

The analysis above stated, proves that no magnesia had been extracted from the soil upon which the tobacco was raised, and I presume no one will suppose that the soil contained no magnesia; the experiment then shows that the presence of magnesia, without lime, is not sufficient to keep up the fertility of the soil: the tobacco having extracted all the lime and no magnesia, is a case exactly to the point at issue;—we have a soil containing magnesia and no lime, and a more barren soil cannot be found.

By this experiment we see the tendency the wheat plant has to absorb phosphates; and where magnesia abounds, we may reasonably conclude that the quantity taken up in the growth of the plant, injures the quality and lessens the quantity of the seed.

That the quality of grain generally, may be injured by too much magnesia entering into its composition, is shown by numerous facts and experiments. Liebig says, "we may form an idea of the quantity of phosphates of magnesia contained in grain, when we consider that the concretions in the coecum of horses, consist of phosphates of magnesia and ammonia, which must have been obtained from the hay and oats consumed as food. Twenty-nine of those stones were taken after death, from the rectum of a horse belonging to a miller at Eberstadt, weighing three pounds. F. Simon has lately described a similar concretion found in the horse of a carrier, which weighed one and a half pounds. According to the experiments of Rouvelle and Brande, "The urine of swine contains a large quantity of the phosphate of magnesia and ammonia; and hence it is that concretions of this salt are so frequently found in the urinary bladders of these animals."

These experiments prove the dangerous nature of magnesia when combined with food for animals; and reasoning from what we know of the effects of magnesian lime and pure lime, will lead us to conclude that it is equally injurious to plants.

I do not say that magnesia in small quantities, is useful or injurious to the growth of wheat; upon this point there appears to be no evidence for or against, but there is certainly much evidence to show that magnesia when applied as a manure, may be increased to a very injurious extent; which is the case, as we suppose, in South-eastern Pennsylvania, where magnesian lime, or lime in spite of magnesia, is producing such wonders in agriculture.

Sand, clay and lime, are the principal constituents of different soils that are in any degree productive of vegetation; magnesia enters into the composition of many plants, but its presence in a plant is no evidence of its being suitable food—it is only evidence that the plant has taken it in as food. It may have received it in the same way that sheep eat the leaves of laurel, and birds eat poisonous berries, because they can get nothing better.

Plants, as well as animals, are sometimes forced to take in food that stultifies their growth, lessens their powers of production, and ultimately terminates their existence. It is now well ascertained that there is a peculiar poison sometimes generated in salted provisions, that slowly insinuates itself into the system of those who feed upon them, until it produces disease and death. The disease produced by this poison, was known long before the cause and the means of avoiding its evils were discovered.

In this way, the disease among horses and swine, produced by feeding upon seeds and plants impregnated with too much magnesia, may have been destroying hundreds of those useful animals, in South-eastern Pennsylvania; and the overcharged quantity of magnesia introduced into the soil by lime, may have prevented the growth of thousands of bushels of wheat, and the inhabitants be as ignorant of the cause, as those who for hundreds of years, have been subject to disease and death from eating a peculiar kind of salted provisions.

These experiments show that magnesia enters into the composition of plants to an injurious extent, in the economy of animal life; and I hold that where magnesia abounds, vegetables take in such large quantities that it produces disease and death. I have seen corn and white clover flourish luxuriantly where heaps of pure lime had been left by carelessness in spreading, to the depth of two or three inches. Now, it is well known that the effects of magnesian lime in any thing like similar quantities, would have prevented all vegetation for many years.

The ground I take, is that the wheat plant in South-eastern Pennsylvania, absorbs such large quantities of magnesia, that it injures the crop; and certainly until we know by direct experiment, the amount necessary to give to plants as food, or whether any, it is "absurd" to buy magnesian in *preference* to pure lime, however plausible it may appear to the "opinion manufacturer."

Upon the whole we may conclude, that if there is but little known of the effects of magnesia upon animal and vegetable life, that little goes to strengthen the opinion that it is "exceedingly injurious" to both.

The facts and circumstances above stated, form the grounds upon which my opinion is founded on the subject of magnesian lime as a manure; I now ask where are the proofs upon which your correspondent, S. Lewis, rests his opinions?

He relies entirely upon the fact, that "magnesian lime, and no other" has produced surprising effects in the agriculture of South-eastern Pennsylvania, which is no proof at all, for no one has ever denied it—no one has even insinuated that magnesian lime is not beneficial to the soil. If S. Lewis intends to rest his defence upon the mere fact, or literal meaning of what he asserts, that the improvements in agriculture have been produced by "magnesian lime and no other," the argument is at an end. He might, with as much reason assert, that those improvements were made by sandy lime and no other—the assertion might be true, but destitute of interest and point. Everybody knows the lime in dispute is impure, but is there any one who prefers the impurities to the lime itself? Is there one farmer in South-eastern Pennsylvania, who would buy sand or magnesia, instead of lime, at the same price, if he had his choice? for that is the real question at issue. As yet, no one has shown that magnesia is in the least degree useful as a manure; while on the other hand, evidences are numerous of its deleterious effects upon vegetable and animal life; its advocates therefore, should either show some proof of its good qualities as a food for plants, or abandon its defence.

B. WEBB.

Wilmington, Delaware, Tenth mo. 5th, 1842.

For the Farmers' Cabinet.

RESPECTED FRIENDS,—My object in addressing you at this time, is to get information. I manured my corn-field early last spring, with the intention of seeding it this fall and laying it down with grass; I have been prevented from fully accomplishing my purpose, in consequence of the dry condition of the ground, which has rendered it unfit for working. After getting the field about half broken up, I abandoned the operation, seeing how poorly, after much labour, the work was done. I now design, should I receive encouragement from any practical operator to plough very early in the spring—sow oats and grass seeds, and either mow the oats for hay, or cut and feed it in a green state to my cattle. As I am entirely unenlightened on this mode of culture, and my neighbours around equally in the dark, I wish to obtain all the information I can through the medium of the Cabinet, whose pages have been greatly conducive to the benefit of the farmer. Such of your readers as may have information to impart, will please to do so, and oblige ROLLER.

Montgomery County, Tenth mo. 25th, 1842.

PICKING WINTER APPLES.—The last of September and fore part of October, is the usual time for gathering winter apples; the flavor may be better if they are allowed to hang on the tree till the middle of this month, but the apples will not keep better, and in many situations they are exposed to waste.

It is common to take a small basket on to the tree and there fill it, then come down and empty it, or let it down by means of ropes, which will upset the basket; but a better way is to prepare some bags or piles of hay, and place them under the tree to throw the apples on; the bag or mass of hay should be so formed, that the apples will roll away from it as soon as they strike. With this preparation a man will pick much faster than he will with a basket tied to himself or to his ladder. A boy below, can change the position of the bag or cushion, and also pick up the apples.—*Mass. Ploughman.*

TOADS.—Among the enemies of bees, the toad has not been mentioned. I am not willing to bring a charge against any of my fellow creatures, however humble in the scale of creation; but the toad destroys many bees. I have seen several skulking near mine, and been informed that, on destroying a toad, more than a dozen bees were discovered in its stomach.—*J. Murray.*

For the Farmers' Cabinet.

Human foot-prints in solid Limestone.

Middletown, Delaware, Sept. 29th, 1842.

Messrs. Editors,—In page 44 of the current Volume of the Cabinet, I have observed an article on human foot-prints in solid limestone rock. The description of this rock, and of its original location, as given in the article alluded to, is so nearly correct, that I should not have considered it necessary to notice it, only from the fact that I had long since drawn up for preservation, a description of this same stone, as well as of another stone and specimen of an ancient relic, which I considered a much greater curiosity. But being only a *humble mechanic*, I thought, if published, it would be passed over as unworthy of observation or remark from antiquaries, geologists, or naturalists, or others able to treat on such subjects; as articles generally are, that emanate from such humble sources.

Mr. Paul Anderson states in a letter dated October 11th, 1841, that "A Mr. John Jones claimed a sort of ownership" to that rock, from the fact, that he, Jones, was the first discoverer of it that season, and that he employed Jones to "cut out the slab for Mr. Frederick Rapp." Now Mr. Anderson writes from memory, near a quarter of a century after this transaction took place, and as he was only an agent in the affair, he might have made a slight error in his statement,—unintentionally, no doubt. This error will be in part corrected, when I state, that on my first landing upon the shore at St. Louis, from my small keel-boat, on the 25th of October, 1816, near twenty-six years ago, the first thing of any note, that met my eye, was these foot-prints; and before I again stepped on board of my boat, I ascertained from a gentleman, then on the shore, a bricklayer, an old acquaintance from Philadelphia, a Mr. James Loper, that any person who wished, could quarry stone at that time, anywhere along the shore; and that the shore was considered public property. I then made up my mind at once, that that stone should soon be my property. And in the course of the following winter I had it cut out and hauled up and placed against my yard picquet fence, on its edge, with the foot-prints inward, so as to prevent their being defaced by mischievous persons. It stood in such a position that the prints could be easily seen from the inside of the fence; and I suppose it was there visited by thousands: more persons probably saw them there, than had ever seen them before. It was there that my friend Paul Anderson, first saw them, and not in their original bed on the margin of the river, as his letter indicates. Mr. Anderson did not arrive at St. Louis, until the spring of 1818 or 1819, I am not sure which,—but not till more than a year after I had placed the stone in question, against my fence. Had I not taken it up at that time, it might have been forever lost, as some Frenchmen were at work within a few yards of it, when I commenced cutting it out. They considered it nothing worth preserving, as they said they had seen and quarried near these same foot-prints, other small foot-prints, and the prints of small children's hands.

There is a mark on the face of this stone, which I see has escaped the observation of all those gentlemen who have visited and remarked upon it, which I considered as worth preserving with the foot-prints; and in cutting out the stone I was careful to preserve them. The individual who made those foot-prints, stood facing, or looking up the shore, and while in that position, it appears as if he had reached forward and with a small stick, or with his finger, had made an irregular, or oval mark near his toes. The impression of the oval mark was about the depth all around, as that of the foot-prints; and in laying off the stone for cutting out, I brought the inner side of the oval mark to about the centre of the stone, thereby preserving the whole entire.*

The stone, at the time it was cut from its original bed, was very brittle and shelly; much more so than those of the ledges higher up from the water, and nearer the surface of the earth—owing, perhaps, to its being so nearly between wind and water; it required great care in taking it up, to prevent its crumbling. It had to be cut with chissels entirely through the stratum, which was about one foot thick.

It is true that I had many extravagant prices offered for it, while in my possession, though previous to that, but little value had been set upon it. I think Governor William Clarke told me he had offered a Frenchman two dollars to quarry it for him. It cost me thirty-five dollars to quarry it and place it against my fence. Had an unskilful hand attempted to quarry and haul it up, ten chances to one, it would have been destroyed: and after I had sold it, although its removal was superintended by Mr. Anderson and Mr. Baker, Mr. Rapp's business man, they broke it in two, and much defaced the prints, before they had removed it twenty yards from where it had stood a long time, and acquired a good deal of hardness. Though but little value was set upon it while it was daily seen by the citizens of St. Louis, many regrets were expressed when it was about to be removed from the shores of the Mississippi, and no one regretted its removal more than I did.

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* Although this mark, or scroll, was not, for brevity's sake, alluded to by L. N. in his communication, page 44, Cab., yet in the original article in Silliman's Journal, from which L. N. drew his information, it is mentioned, and the description there, very well corresponds with this of Jones.—Ed.

Your correspondent, L. N., quotes from Dr. Owen, who says, "we must admit the probability, that the aborigines of North America were unacquainted with the use of iron tools." With Dr. Owen and all other writers on that side of the subject, I must beg leave to disagree, as a specimen of a most ingeniously wrought metalic instrument was found by me, the construction of which must have been long anterior to the date of the foot-prints, or to the erection of the mounds on the "American bottom," as its high location will show.

But I must stop short and refer you to my original notes, made long since, upon this subject, and not made public, for the reasons set forth in the beginning of this communication. That vast country has undergone great changes upon the face of it. They are indicated by the marks of the abrasion of the water, several hundred feet above the present level of the river Mississippi, which show plainly on the bluff on both sides of the river, at the "Grand Tower."* One of my limited capacity, or means of obtaining knowledge, should not venture a single remark upon these changes, nor upon the race of men that then existed. or the age in which they flourished: nor will I at this time.

Respectfully yours, John Jones.

In 1818 I resided in St. Louis, and was engaged in the erection of the cathedral that has been taken down some time since. While laying the foundation with stone, I discovered, and in my wish to preserve, I destroyed, by an unlucky stroke of the hammer, what I considered a very ancient specimen of art. I had broken a flat stone about eighteen inches square in three parts, and upon turning up one piece of it, I discovered something in the shape of a part of the blade of a sword; and upon turning up the adjoining piece, it showed a continuance of the blade. This induced me to turn up the other piece also, and this showed a handle, or hilt, with the guards, &c. The sword appeared to be about the size and shape of a dress sword, worn at that time by Captain Magee, of the U. S. army. It was about fourteen inches long, from hilt to point, and very crooked. That part of the handle that is generally of bone, or ivory, was black, as if of ebony, and twisted, and reeded, and appeared petrified. All the metal part, including the blade, guards, pins through the handle, and rivets, whether of steel, iron, silver, or whatever metal they were made, showed their size and proportion as plainly as they would in that described as worn by Captain Magee. Upon the discovery, I called all hands that were engaged about the building, to look at it. They all concurred with me in the opinion, that it was a petrified† sword, and that it must have fallen upon the mud, or earth, previously to the mud, or earth turning to stone. It was but slightly embedded in the stone. Unfortunately I had not the presence of mind, or I might have preserved it entire, by simply cementing the slab of stone, which was about four inches thick, and fastening it in a box, like a plate of glass in a frame. The metal part had the appearance and consistence of rusted metal, although it retained its full size and shape. The handle, from its hardness, though broken into three pieces, I preserved several years, but finally lost them. The balance of the sword fell, or crumbled with the tap of the hammer. Immediately after its destruction, I went down to the quarries with the view of ascertaining its original position, or location. I found the men at work about ten feet below the surface of the rock, which at that place, was nearly bare of earth above; and so far from the face of the rock, or river bluff, as to admit an ox team to turn in and *back*, for conveniently loading—say about 30 feet. The stone in that quarry is of the best limestone. It lies in horizontal strata, from one inch to one foot in thickness. The quarry was on the lot of René Paul, Esq., and immediately in the rear of the stone house in which he then lived and kept store. This rocky bluff was at that time and place, about 40 feet above the ordinary high-water mark—nearly perpendicular, and much furrowed, as if by the abrasion of the water, as the bluff of that river on both sides, and also the shores of its tributaries in many places show.

At the time spoken of, I had a curious specimen of petrifaction in my possession. It was a stone which I cut out something higher up the river, than where the sword was found, and if my memory serves me, about opposite the residence of Mr. Pierre Choteau, Esq., but nearer the low-water mark. The stratum was about 10 or 12 inches thick, 8 feet long, 3 feet six inches broad; and on its face, which was very smooth, it bore the impression of two human foot-prints, about in the position a man would stand in taking aim at an object with a gun or bow and arrow, and facing up the river. I afterwards sold this same stone to the agent of Frederick Rapp, of Harmony, Indiana, and received for it one hundred and fifty dollars. This is the same stone which is described by Colonel Long, in his Expedition, as being used for a platform, or step at the church door in Harmony. (This stone ought not to have been used as a step, but on the contrary, should have been set on edge in the building, where the foot-prints and other marks could have been preserved. As they are now used, the whole prints will soon be obliterated. Will the present proprietor not attend to their preservation!)*

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* The Grand Tower is a fast rock, or island—a great mass of stone, several hundred feet in circumference, and is estimated by some travellers to be 200 feet high. It is situated in the Mississippi, nearest the Missouri shore, about half way between St. Genevieve and Cape Girardeau. J. J.

† Probably the metal was converted into a carbonate of iron.—Ed.

This last stone when first discovered by me, I thought a very great curiosity; but after the discovery of the sword, I thought this but a small affair, as it was but a petrifaction, thousands of which, of different kinds, may be found on the shores of the Ohio, in all shapes and forms; while the other—the sword, shows the work of art and civilization.

The facts are here stated in both cases,—I will leave it for antiquaries to decide, by what people, and at what age, that sword was constructed; and what was then the situation of the country above the Grand Tower, embracing all the flat country above, or within the high-water mark, as indicated by the appearance of the bluff on either side of the Mississippi, at that place. These indications plainly show that high-water mark at the Grand Tower, was once some hundred feet higher than it now is.

John Jones.

Neatness in Agriculture.—The remark that agriculture and civilization keep pace with each other, may be applied to individuals as well as nations. If in passing through a country, we were to discover a miserable and wretched system of agriculture, we should not expect to find an educated and intelligent people; nor in passing a farm, characterized by every mark of neglect and indolence, should we expect to see in the owner, an industrious and intelligent man.

Bees.—We take the following from the Massachusetts Ploughman: "There is much in the history and economy of the bee, that is both interesting and delightful. The circumstance related below, seems to be one of its freaks for which it is hard to account.

"A swarm of bees was lately found in this town, occupying a *bush* on which they had located themselves, and built their comb to the size and shape of a horse basket. The comb was attached to the leaves, limbs, &c., of the bush, and was of all shapes to correspond with the bush to which it was attached. When found, the comb was stored with honey and well filled with young bees in every stage of perfection, presenting the appearance of a healthy and prosperous swarm.

"The bush which they had chosen for their residence, was of the kind called shrub oak, and was not sheltered from wind or rain. They were transferred to a hive, and are now in the possession of the writer, apparently well pleased with their new habitation, and are doing well. The comb which they had built in their out door residence, is preserved for the examination of the curious, it being a circumstance beyond our limited experience in the history and habits of the honey bee. J. B. F.

"Seekonk, August 5th, 1842."

Numbers.—How easy it is to speak of millions and billions, yet how difficult to conceive what even a million is! But still we should endeavour to obtain some idea of that mighty number. Suppose we speak of the national debt of England; the words expressing the round sum of eight hundred millions sterling, are already spoken: but who can form a conception of that amount? We know, however, what a dollar is; and we may, for convenience, consider its value equal to a crown piece, or five shillings. We know, too, what are minutes, hours and years. Then we may form some idea of the amount, though a remote one, when we discover by calculation, that the debt is considerably more than a dollar per minute, from the time our first parents were in paradise, to the present day!—more than fifteen pounds sterling, per hour, through all the ages of man's existence! A *billion* however—a million of millions—is a far more comprehensive term; so much so, as to be, perhaps beyond all conception. Taking the Mosaic date, as nearly as can be computed, the world has not yet existed, even one fifth part of one billion of seconds!—*Extract.*

Apples.—A gentleman at Red Hook, on the Hudson river, recently sold twenty-four hundred barrels of apples, all of his own raising, for $3,600.

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* It will, doubtless, be gratifying to the writer of the above, to learn that the slab is now preserved in Dr. Owen's Museum of objects of natural history, at New Harmony.—Ed.

Manufacture of Horse-shoes.

EDITORS OF FARMERS' CABINET,—According to the late census of the United States, we have at least four millions of horses, to be shod, perhaps twice round, annually. This probably requires twenty thousand tons of iron and steel, which, together with the making and putting on the shoe, swells up to no trifling item, in our yearly expenditures. Henry Burden, of Troy, N. Y., took out a patent some two or three years ago, for manufacturing horse-shoes by machinery. He does not appear, however, to have been able to perfect his plans and bring them into operation, till recently. We now learn that he is successfully at work, taking the straight bars of iron and transforming them into horse-shoes, grooved and punched, at the rate of fifteen per minute. Shoes of five different sizes are made, so that the foot of any horse is pretty sure to be fitted by one or the other. The nail holes are punched—the heel corks are turned, and the steel toe corks are welded on, &c., with an accuracy and rapidity, which the eye and hand of the most expert workman cannot attain. It is said none but the best Swedes' iron is used by the inventor, and that he is able to reduce the price of horse-shoeing by one half. I have not seen any of the shoes manufactured by this process, but it certainly appears to be such an improvement in the production and economy of an article of general necessity, that the whole country must feel interested in it.

Shoeing the horses on my little farm, has sometimes cost me twelve or fourteen dollars a year; and in rough, mountainous districts, the expense would, of course, be much greater. Now, if I could save six dollars a year in this particular, it would be as good as the present price of twenty bushels of potatoes, after I had carted them to your city. Will our smiths attend to it?

Yours, with respect, T. M.

Salem County, N. J., October 10th, 1842.

For the Farmers' Cabinet.

Thorough Cultivation of Corn.

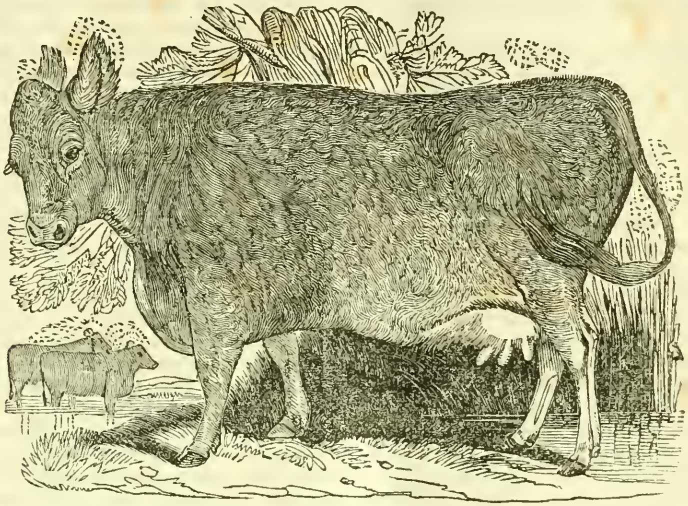
MESSRS. EDITORS,—In the August Number of the Cabinet are two communications on the cultivation of corn, than which, perhaps, there is no subject of greater interest to the American agriculturist; it is one at least that will bear a *thorough stirring*. I must, however, be permitted to differ with your correspondent, "P. J.," as I apprehend very few of us are guilty of the sin of overworking our corn crops in *proper season*, and if he or any practical farmer, expects to grow a full crop, by merely "throwing a furrow from each row into the interval, there to lie for a season, and then to be returned to the rows as a last tending," I fear he will be disappointed in the result. My experience, however, has brought me to very different conclusions. I have no fears of overworking my crops, if done *timely*, for on that every thing depends; I make it a point never to work my corn when the earth is "full of water, and when the furrows turn over like mortar;" a worse system could not be devised. A knowing one at my elbow, says, "corn should never be worked except when the dust will fly," and I guess he comes much nearer the mark, than P. J.'s "neighbour Clifton." In sandy land it is almost death to corn to plough it in wet weather, being certain to "scald."

I would inquire by what kind of management the enormous crops of 100 bushels and upwards, have been obtained? Is it by partial cultivation, or by the most thorough system of working and stirring the soil that could be devised? I have no doubt, however, that better crops have in some instances, been obtained from fields that have received but little attention, than from others where a great deal of labour has been bestowed; but isolated cases may be taken, from which anything or nothing may be proven! Witness, for instance, the fields of my two neighbours; J., an enterprising go ahead little fellow, with more zeal than prudence, ploughed and harrowed, without regard to the weather; the consequence was, he "scalded" his crop, but not a weed to be seen. B., a "slow and easy," "time enough" kind of man, simply harrowed once, and ploughed once, and then laid his crop by; the weeds at this time, are growing most luxuriantly, and a better crop of corn than J.'s. Now, does this argue much in favour of partial cultivation? I think not. Had J. consulted the weather a little more, I have no hesitation in saying, he would have been a gainer of some 20 bushels per acre.

"S. S. I." has a very interesting paper, from which I hope to see much good result; but who ever heard of ploughing corn to the depth of 8 or 10 inches. I presume there is no field of corn in the country that would survive such an ordeal, particularly at the season when it is to be laid by.

And would it not be well, Messrs. Editors, before you consider the question answered, "How is it, it so often happens that corn which has by some means escaped its *last* workings, turns out a better crop than that which has been tended to the end," to inquire whether it has any foundation in fact. I think, upon a critical examination, you will find in it a pretty little *bull*. A.

Gloucester county, N. J., Sept. 12th, 1842.



THE SUFFOLK COW.

THE SUFFOLK DUN was once celebrated in almost every part of England, on account of the extraordinary quantity of milk that she yielded; but the colour is no longer considered the only, or chief recommendation, in this still favoured race. The breed is still known as the Polled or Muley, although some of the calves are found with the rudiment of a horn; but these are rejected by the breeders. The Suffolk Cow is described as having a clean throat, with little dewlap; thin and short legs; the ribs springing well from the centre of the back; the carcass large, the belly heavy, with the back-bone ridged; the chine thin and hollow; the loin narrow; the udder square, large and loose, and creased, when empty; the milk veins remarkably large, and rising in knotted puffs, and this is so general, that a famous milker was scarcely ever seen that did not possess this point; a general habit of lameness; hip bones high, and ill covered; and scarcely any part of the carcass so formed, as to please an eye that is accustomed to fat beasts of the finer breeds. The prevailing colours, are red, and red and white, brindled, and the varieties of the Duns, from the yellowish cream-colour to the brown. The bull is valued if he is of a pure and unmixed red colour, and in no part of the country were the farmers more careless as to the breed, provided only, that the cows were true Suffolks; merely inquiring if the bull came from a dairy of great milkers. The Suffolk cow is not inferior to any other breed in the quantity of milk that she yields; some of these diminutive animals giving as much as eight gallons a day; six gallons not being an unusual quantity. From a comparison made between the milk of a Suffolk cow and that from a long-horn of Mr. Toosey's breed, the milk set in a bowl for thirty-six hours—it was found that the cream of the Suffolk, from three quarts of milk, weighed two and a half ounces more than that from the long-horned; and on churning, one quarter part more of butter was obtained from the cream of this cow than from that of the other. Three of these small animals, one of them a heifer with her first calf, were kept on three acres of grass without any change of pasture until mowing time; and in the winter, chiefly on straw, with very little hay; both the old cows yielded eight gallons of milk per day during the height of the season, and the quantity of butter made from June to December, was 683 lbs. The Rev. Arthur Young remarks, "One Holderness cow would have consumed all the food of the three, without returning one half the produce." There are few cows, although far superior in size to the Suffolk Polled cow, and consuming nearly double the quantity of food, that will yield more milk than is usually obtained from this diminutive, ill-formed race. Fifty thousand firkins of butter, each weighing 56 lbs., are sent to London every year from Suffolk. A small quantity of cheese is also made, but this is of inferior quality; the object with the dairy-man being butter, which commands the highest prices in market, if warranted "*the real Suffolk*," and of which, the beautiful yellow colour is often deemed a sufficient indication.

Effects of Charcoal on Vegetation.

Some of the gardeners and scientific men of Germany, have within a few years interested themselves in a series of experiments upon this subject, conducted at the royal botanic gardens of Munich, by Edward Lucas, of Erfurt, assistant gardener. The results are highly curious, and may probably be turned to good account by cultivators in this country. Professor Zuccarini, of Munich, mentions that by the use of charcoal, shoots of plants, leaves, parts of leaves, calyces, &c., may be made to grow, even of plants that seldom or never make roots in the usual way of treatment.

He states that Lucas, in the spring of 1839, discovered that several plants in a hot-house that were plunged in refuse of charcoal, showed an extraordinary vigor of growth, as soon as they had pushed their roots through the holes in the bottom of the pots, into this under stratum. This observation led to a set of experiments, which quite astonished himself and the scientific friends who encouraged him to prosecute them.

He at first used the refuse of charcoal, too fine to be burnt, from which he sifted the coarser pieces by a coarse earth sieve. He found that to answer best which had been exposed for some months to the influence of the air and weather. In such charcoal, unmixed with any other material, he succeeded the first season in getting cuttings of many plants to grow; he names sixty-six kinds; among them, Euphorbias, Begonias, Cacti, and other succulent plants, black pepper and the bread fruit. The unsuccessful experiments were few, compared with the successful. From parts of leaves, he succeeded in getting a considerable variety of plants to vegetate; he enumerates twenty-nine, including a species of Euphorbia, two of Begonia, and the sweet potatoe. All the species of Gloxinia grew, even from a flower stem, or a calyx. A species of pine (*Pinus excelsa,*) grew from the leaves.

He then mixed various kinds of earth with the charcoal, and still had the most extraordinary results. He says that all the plants he subjected to this treatment, were as much distinguished by their luxuriance, as by the more perfect developement of their individual parts. This was particularly the case with tuberous rooted plants, which besides their perfect developement, had also a much longer period of vegetation; so that the difference in this respect, between those that were cultivated in their usual soil, and those which had a mixture of charcoal, amounted to nearly two months. Orange trees with yellow leaves, having had a layer of charcoal laid on after the upper surface of earth had been removed, soon recovered their green colour; this was also the case with some other plants. He was not very particular as to the proportion of earth he mixed with charcoal, but generally found half of each to do very well, always taking care that the coal had been exposed for some time to the weather, and that timely watering was never neglected, as the porosity of the earth causes it to dry quickly. An old and sickly plant of the Doryanthes excelsa, which had been declining for two years, and had no roots left but one old and decayed one, was planted in one third charcoal. In three weeks it began to grow, and finally recovered perfectly.

Lucas, in an essay written within a year, mentions that many gardeners not having succeeded in their experiments, charcoal had fallen into disrepute among them; but he believes that in every case the failure was owing to the manner of applying it, or to the quality of the coal itself. He has found that in many cases, particularly when used in pots, as soon as the capillary vessels of the charcoal are full, a further supply of water is useless and injurious; when mixed with soil, however, it requires more frequent watering. But the chief cause of failure was the fineness of the charcoal, by which its most valuable qualities, capillarity, capability of condensing gases, and porosity, were lost.

Many new plants, of which he names seventy-two, some very difficult sorts to root, had grown in charcoal, since his last published essay. He mentions four kinds of magnolia, a myrtle, Canada pine, Indian azalea, an erica, the *tendrils of a grape*, the oleander, and two kinds of medicinal guaiacum. Among the plants he names, are species of the most opposite families, and most of them rooted much easier than in sand or earth; with some, no trial of the usual methods of propagating had before been successful at the botanic garden of Munich. He had not made much use of charcoal in sowing seeds, but when applied, it had proved very efficacious. He had made experiments upon the fitness of charcoal for packing plants for transportation; and for this purpose some young chamœdoreas, ferns, calceolarias, salvias, verbenas and young cabbage and cucumber plants, some with moss round the roots, others without any covering, were put in dry or very slightly moistened charcoal, firmly pressed down, and the closed box placed for four weeks in an airy shed, on which the sun shone for several hours; at the expiration of this period, the palms and ferns were found in a very fresh state; the calceolarias and salvias had some yellow leaves, but had made young shoots; a species of petunia, even flowered on the box being opened; the verbenas only had suffered, but were still alive; the young cabbage and cucumber plants taken out of dung beds had rotted, but without injuring any of the plants lying beside them; cut flowers of many different sorts, kept perfectly fresh in pure dry charcoal, from eight to fourteen days. Radishes, parsnips, onions, and the turnip-like roots of oxalis lasiandra, *Zucc.*, attained a considerable size in a bed filled one foot deep with pure charcoal; the roots of tulips, which had produced flowers in the spring, being planted in the same bed, flowered again, perfectly well, late in the autumn.

To prove if any difference existed with respect to the efficacy of different sorts of charcoal, the garden inspector, M. Seitz, had charcoal made from eight kinds of wood, viz.: oak, linden, ash, beech, alder, willow, elm and fir. They were found to have almost exactly similar effects. It was very different with animal charcoal, which in this experiment, produced the most favourable results; many leaves rooted in them which had not succeeded in the wood charcoal, and some very soon produced shoots.

Zuccarini says that those leaves were found to vegetate most freely, which had strong prominent veins. The cut ends of these being placed in the charcoal, a small tuber or callosity, formed upon the extremity of each. These attained the size of a large pea before putting out roots, and from them proceeded the germ, or shoot, which formed the new plant; each vein thus producing a separate plant. He found it of advantage, as soon as the growth of the tuber was sufficiently advanced, to remove the cutting from the coal into a proper sort of mould, and, by this means, the little knob being able to provide its own nourishment, will prevent the untimely exhaustion of the parent leaf. If this precaution is delayed, an entire stoppage takes place in the growth; the knob produces neither roots nor buds, and dies; because the parent leaf cannot yield any more nourishment; and the charcoal appears to him to have a preserving and stimulating, rather than a nourishing quality.

W. Neubert, of Tübingen, discovers, however, that by the use of charcoal, plants thrive permanently in much smaller pots than heretofore. He had primulas, eight years old, with stems a foot and a half high, growing and blooming luxuriantly in pots of two inches diameter. He transplants them every autumn, and takes away half the ball of roots and all the side shoots, and is careful to keep them tolerably moist. He finds his plants (quite the reverse of Lucas's experience,) produced much fewer roots than usual, and conjectures that this may be owing to his having used beach coal instead of fir, as Lucas did.

Dr. Buchner undertakes to explain upon scientific principles, the wonderful effects of charcoal. He ascribes them in part to the power possessed by that substance of absorbing light and heat to a very great degree, in consequence of its dark colour and extreme porosity; and also to its capacity for absorbing atmospheric air. Among all the bodies capable of absorbing gases and vapors, charcoal has been proved by numerous experiments, to hold the first rank. Consequently, when long exposed to atmospheric action, it imbibes many qualities highly conducive to vigorous vegetation, and is the means of conveying to the roots of plants, besides light and heat, nitrogen, hydrogen and oxygen, in great abundance.

He remarks that for a long time it was generally supposed that charcoal, as an inanimate body, incapable of decay, contributed, in no degree, to the nourishment of plants, and that charcoal dust could only serve, at most, to make the earth looser and warmer. But Lucas found that the charcoal in which plants grew, by degrees underwent decomposition.

Judging from the effects of charcoal on vegetation, its antiseptic properties are of great importance. It has very little power of retaining water; and this property deserves great attention, in respect to recovering the health of plants which have been injured by being in a clayey soil, or too freely watered, or after continued rain, or being in contact with manure not sufficiently decomposed.

Lucas has not confined his experiments to coal. He has for six years been making use of *snow* in the germination of certain kinds of seeds, chiefly those of alpine plants. He first put into pots a portion of earth, the most suitable to the kind of plant to be cultivated; then a layer of snow, then the seed, and covered it with another layer of snow. He then set them in a box covered with glass, and placed it in a temperature of 59° to 60° Fah., in which the snow melted. Many of the seeds germinated in two days. He even succeeded with the purple crotalaria, which he had never done before by any other method. After germination, he sprinkles a little sand over the seed.

Professor I. Liebig, of Giessen, who has devoted so much learned research to agricultural chemistry, is of opinion, "that the loose formation of the snow, which allows of an uninterrupted admission of oxygen; the exclusion of those foreign agents which are always found in a soil that contains corrupted vegetable matter; and finally, the volatile alkali of the snow,—all these causes combined, effect the remarkable appearance of germination in this process."—*From The Friend.*

For the Farmers' Cabinet.

Lamp for burning Lard.

Having noticed in the last Number of the Farmers' Cabinet, some remarks respecting Lard oil, and the subject attracting at the present time very general attention, I am induced to mention the experience I have had in the consumption of lard itself, to furnish a beautiful and brilliant light. Being lately on business in Boston, I called at the store of a friend in the evening, and to my surprise noticed his premises finely illuminated: this, however, was soon and readily explained by the fact, that he was interested in the sale of "Southworth's Patent Lard Lamp." The article in use was the common tin, or glass lamp, with a wick, just such as is used for burning Sperm oil, only with the addition of a flat copper heater, which comes up closely in contact with the flame, and descending to the bottom of the lard, returns again nearly to the top. The copper is thus heated by the flame, and it being a good conductor, the lard becomes completely liquified; and the contents of the glass lamp, after it had been under way for a short time, looked like the finest bleached oil. My friend stated that lard at eight cents per pound, in this lamp, would cost no more than the very best Sperm oil at fifty cents per gallon, and would give as much light. At his suggestion I bought a couple of beautiful parlour lamps for use, and on trial, find them perfect; the light is pleasant and bright, there is no disagreeable smell, and the wick requires to be trimmed or snuffed, only once in an evening. The apparatus for heating is so complete, that not only lard can be used, but tallow, or any other fatty substance.

And if this lamp should obtain general use, it appears to me the farmer would be spared the trouble of making candles. If he wishes to use tallow or lard, all that will be necessary, is for him to obtain one of Southworth's Patent Lard Lamps, put in the wick as he would to any other lamp, then just before he wishes a light, *melt* the tallow or lard, fill up the lamp and light the wick, and my word for it, he will have as pleasant a light to read the Cabinet by, as the oil from the whale will give. And then he has the whole within himself;—he need no longer be dependent on the success of the Whaleman; he can set quietly at home and enjoy his domestic light, and read with indifference of the poor success of this or that voyage, in search of the monsters of the deep.

Before leaving the subject it may be as well to say, that Ellis S. Archer, at 32 N. Second street, Philadelphia, has a Patent Lard Lamp, which is highly spoken of by some who have used it. V.

Philadelphia, Tenth month 11th, 1842.

Thunder Storms.

As we are so often visited by these storms, which are usually of great severity, and seldom pass over without some damage to life or property, the following facts relating to them, will be read with interest by those who have never before had them, and will serve to refresh the memories of those who studied these principles in their philosophy.

The distance of a thunder storm, and consequently the danger, is not difficult to be ascertained. As light travels at the rate of about 66,420 leagues in a second, or nearly 200,000 miles in one second of time, its effects may be considered as instantaneous, within any moderate distance. Sound, on the contrary, is transmitted only at the rate of 1,142 feet in a second. By accurately observing, therefore, the time which intervenes between the flash of light and the beginning of the noise of the thunder which follows it, a very accurate calculation may be made of its distance, viz.: when you observe the lightning, and ten seconds elapse before you hear the thunder, you are two miles out of danger; if five seconds elapse between, one mile out of danger; but if you only distinguish one second to elapse between the lightning and thunder, then you may estimate yourself, only 1,142 feet from the dangerous fluid, and the nearer to the light you hear the thunder within one second, you may count yourself in danger; by having a knowledge of these things, there is no better means of removing apprehensions. If the thunder rumbles seven seconds, you must be aware that the electric fluid has passed through the atmosphere to the earth, a distance of nearly one mile and a half. Sometimes the fluid skips from one cloud to another, before it comes to the earth. There is no danger to be apprehended from the thunder, but that it operates as a warning, when well calculated.—*Cheltenham Chronicle.*

From the S. W. Farmer.

Importance of Indigo Culture.

Messrs. Editors,—Among the numerous valuable articles in your excellent paper upon various kinds of husbandry, I have seen no notice of any attention to the culture of indigo. I have been quite lately informed by a mercantile gentleman, that the price of good indigo by the large quantity, is now from $1 25 to $1 50 per pound. Believing that at much lower prices than these, the products of an acre of indigo would be far more profitable than one of cotton, I am induced to give you the following hints. As I write from memory, and have not for some years seen the work to which I refer, I am compelled to be very general in my statements.

In Edwards' History of the West Indies, there is a pretty full account of the culture and manufacture of indigo, including estimates of the labour, expense of fixtures, amount of products and price, by which a tolerably correct estimate can be formed of the profits of the culture; together with these, he gives with some fulness an account of an improved process for extracting the colouring matter from the green plant. The old method of fermenting the weed in water, is attended with many difficulties. The odour exhaled, as the plant contains a large amount of hydrogen, is exceedingly offensive and deleterious to health; but all these are avoided by substituting boiling for fermentation, and more and better indigo is obtained. A principal reason assigned for discontinuing the culture of this plant in South Carolina, was the fatality endured among servants. If, as I fully believe, this evil can be entirely avoided, why may we not add this to the other profitable kinds of husbandry in Mississippi? It is admirably adapted to all our light and dry soils, and flourishes even on the poorest pine ridges. It requires less expense of labour and machinery than cotton, and if any reliance may be placed in the statements of the historian above named, it will be found to be much more profitable. Ever yours,

A. B. L.

Who is rich?—He is to be considered rich who is out of debt, and supports his family comfortably and creditably by his occupation. He is actually rich who owes nothing and is worth $20,000; he is very rich, who, free from debt, is worth $100,000; and he is dangerously rich, who is worth a million, and is not a prudent man. The possession of *no* money is inconvenient, and *too much* is burdensome. Contentment is riches. Be satisfied—be contented.

For the Farmers' Cabinet.

Philadelphia Agricultural Exhibition.

I have had the good fortune to enjoy the meeting of this long established festival, and am grateful for the opportunity afforded me, of mingling in converse with my brethren of the soil. It has been a season of true enjoyment; one that throws all others of mere amusement into the shade. I attended it from a distance of many miles, purely on the score of attachment to my profession, and spent three days in the examination of every part of the exhibition, closing with that, the most exciting of all, the trial of ploughs and ploughmen. And I did this, with the intention of sketching a bird's-eye view of the panorama, for publication in the Cabinet, a work which I have read with pleasure and profit from its commencement; subject of course to your approval. You will find me speaking my sentiments plainly, but with no wish to interfere with the established rules of the Society, claiming, however, the right of private judgment and the privilege of declaring it fearlessly.

The arrangements were admirable, and reflected credit on the committee. The accommodations for stock were very extensive, and it is to be lamented that a single stall should have been unoccupied. The attendance was not equal to expectation, and I regretted the absence—from what cause they ought to declare—of several of our most spirited improvers, with their fine stock, whose presence could ill be spared. The display of agricultural implements was very large and highly interesting; and it must be told, they seemed to draw much of the company from the examination of the live stock, many of which had often before been on the ground, and had enjoyed a lavish expenditure of premiums from the small fund which it is in the power of the Society to bestow; while it is but fair to admit that the premium for the best bull, has at length changed hands—a perfectly fair award; for in my judgment, there never was a question as to the merits of the two animals; Colostra's defective rump, and indeed his hind quarters generally, contrasting so forcibly with those of the Prince of Wales, as, one would think, might be palpable to every practised eye. But this decision shows, most conclusively, the uncertain and unsatisfactory nature of these awards, and will forever deter me from placing the character of my animals for public judgment, in the hands of any man or set of men, whatever. I should have no objection to *exhibit* my stock, but to commit them to the mercy of men, whom I may possibly know to be deficient in judgment and experience—not to say prejudiced against them—to pass public sentence upon them, is what I never have done, and never mean to do. Now, here is Colostra; never in better condition or more perfect in any of his points; for years declared to be "unrivalled," and having carried away all competition; is this year, "judged" inferior to the Prince of Wales," who is not, in any respect, better than he was the last year! losing thereby, that credit which he has hitherto enjoyed, much to the profit of his owner, who will be able the next season, to appreciate the injury done to his interests by this award. Then again, the premium for the best bull over three years old, was awarded to Leander; but I would ask any man, if Leander is improved in any way, since the time when he was declared by the "Judges," inferior to Sam Slick? Again, Judge Longstreth received this year, the premium for a calf, showing very much the peculiarity of his stock, which the last year was considered so exceptionable, that it is said he removed his cattle at the close of the first day's exhibition, on that account, contrary to the rules of the Society. Now, in my estimation—which of course, goes for nothing—the best bull on the ground, was Mr. Sheridan's, of Chesnut Hill; it is true he was not offered in competition, but if he had been, he would have stood no chance for premium, as he has no pedigree! true, neither has he those crying defects, which many of those that have figured in the Herd-book and elsewhere, will carry with them *to their graves.* Indeed, I should be glad to learn what are the defects in Mr. Sheridan's bull, although he had not been kept up a day, in preparation for the exhibition.

I have said, the most interesting part of the exhibition was the great number and variety of agricultural implements; very superior to those exhibited at Albany, by the New York State Agricultural Society, a few days before, and far more numerous than the last year's collection; but in the opinion of many who were present, in no previous year had they claimed less attention from the judges; the very slight regard paid to some, and the many which were passed unnoticed, being anything but satisfactory to their owners and exhibitors. And as proof, it has been remarked, that no premiums were awarded to the reaping, or mowing machine, the drilling machine, the grass sowing machine, the root, or vegetable cutter, the corn-sheller, or the second-best straw and hay cutter; although these articles were specially appointed for competition in the published list of premiums. But stranger still; although it was officially announced that "no premiums on ploughs would, *of course*, be awarded until after the trial, to take place the last day of the exhibition;" yet, *before the trial*, two premiums were given, the first to Dickinson's, and the second to Garrett's, without the possibility of the judges having it in their power to know anything of their merits, as they had never been tried! even the owner of the "second-best plough" declaring himself "quite at a loss to conjecture how the thing was *managed*, as his plough had never been tested!" Thus repudiating the awards of the last two years, which had given premiums to the centre-draught plough, as "the best after trial."

The trial of ploughs was an arduous one; perhaps for horses and men, nothing more difficult was ever attempted, and great praise is due to the almost superhuman skill and strength displayed by the ploughmen; but how any premium could be awarded to a labour, which was as far distant from ploughing as from grubbing, I am at a loss to conceive; for the impenetrable state of the land was an interdiction to the use of any plough boasting the quality of approaching "the spade in the cultivation of the soil,"—a character which appears at length to be the desideratum sought after, and not the mere force of the wedge or the grubbing axe—for I conceive it must be clear to any reflecting mind, that the plough which is *least* effective in a soil so hard as only to be operated upon by the wedge or mattock, is the most likely to be *properly* effective on land when in a fit state to be turned; its very character of "taking up the soil and placing it, when broken, just where it is required; laying it close and even, with the interstices between the furrows filled with pulverized earth without sod,"—the very thing aimed at in spade labour—rendering it the most unfit implement of all others, to take the place of the grubber. Perhaps our Eastern friends are the best cultivators of the soil; and with them it is a *sine qua non*, that the plough shall approach "the spade in the effectual working and sub-dividing of the land;" and to the best of these, have they uniformly awarded their premiums.

On the subject of premiums I am likely to differ with many friends, and yet I cannot but believe that my view of the matter is correct. I would award none, nor express publicly, an opinion of the merits of the animals, &c., exhibited, but permit every one to bring his stock and retain his own conviction, without submitting them to the judgment of any set of men whatever; for it is hardly to be expected that strangers to animals, the growth of which has been anxiously watched for years, and their different points commented on with unmixed delight and approbation by their owners, should be competent to judge them, so as to give satisfaction to their possessors. And what but good could result from the course proposed? one would suppose that any one who has a superior animal, would be as glad to exhibit it for *love* as for *money*, and friendly competition would then take place of the heart-burning which is now so generally witnessed. I would, therefore, respectfully propose the experiment; the funds of the Society could be expended far more agreeably in defraying the cost of the transport of fine animals from a distance, the keep of them while there, improved accommodations for visitors, and a reduction in the expenses attending the exhibition—all tending to good fellowship, kind feeling, and healthy emulation; every one retaining his opinion regarding the merits of his stock, without the mortification of hearing it publicly declared, that they are inferior to those belonging to his neighbour; by men whom he may deem quite incompetent to the task of forming a judgment. I should then expect to see many more fine cattle from a distance; the exhibiting and sale of which, both public and private, would create a wider influence; instil new life and vigor into the Society, and be the means of adding very much to its general interest and utility. Z.

October 25th, 1842.

Agricultural Exhibition.

Report of the Committee of Arrangement.

The Philadelphia Society for promoting agriculture, held their annual exhibition of live-stock, agricultural implements, &c., at the Rising Sun Village, on the 12th and 13th of October, inst. The number of cattle on the ground, was not so great as on some former occasions, but the committee takes great pleasure in confirming the opinion expressed by the judges, that the quality was fully maintained, and that the young stock particularly, gives promise of continuous improvement. Of swine, there was about the usual number; consisting of Berkshire, native, and crossed breeds, which were very uniformly good. We have generally been indebted to our neighbours of Delaware and Chester, in a great measure, for the display of sheep; but on the present occasion we have to regret that their fine flocks were absent, doubtless owing to the dry, dusty weather, and the interference of the general election.

The committee was gratified to perceive an increase of horses brought forward, and many of them very superior of their kind;—the citizens of Pennsylvania are obviously giving more attention to the blood, and are introducing a race very superior to the heavy and cumbrous horse of former days. The committee particularly recommends that the Society provide suitable stabling for horses brought to their exhibitions. The want of such accommodation is a serious inconvenience to the owners of these noblest of animals.

The depression occasioned by adverse times, entirely prevents that remuneration which those who raise fine stock deserve, and have a right to anticipate; yet we entertain the hope, that our agricultural community will eventually appreciate the advantage of breeding from good animals of every species, rather than the scrubby and thriftless quadrupeds with which the fine fields of Pennsylvania are occasionally deformed.

With the farmers of the interior or remote sections of country, where land is cheap, the raising and feeding of cattle and other stock, have been pursued to greater comparative advantage, than near large cities. The abundance and cheapness of improved blood within our borders, should not therefore be overlooked by them.

The Committee of Arrangement is thoroughly convinced that this Society, like those of the Eastern States and England, might make a moderate charge for admittance to their grounds,—the receipt of which, would enable them to grant many facilities to visitors, and hold out still further inducements for farmers to exhibit their valuable stock and produce.

On the day succeeding the display of stock and farming implements, the excellence of ploughs and skill of ploughmen were tested, under the eye of an able and faithful committee of judges. Although, as they state, the ground was dry and unfavourable, the interest was great and the result entirely successful. We are satisfied, that to try the general qualities and comparative advantages of different ploughs, a whole day is requisite; and to ensure the same success on future occasions, recommend the observance of this precedent.

The Committee of Arrangement does not deem it necessary to enter more minutely into the description of stock, implements of husbandry, &c., as they are sufficiently particularized in the accompanying reports of the judges.

Kenderton Smith, *Chairman.*

Algernon S. Roberts, *Secretary.*

Philadelphia, Oct. 23d, 1842.

Premiums awarded by the Philadelphia Agricultural Society, at its late Exhibition.

For the best thorough bred stud horse, to Dr. C. Irvine's horse "Grouse," the first premium of $12.

For the best stud horse adapted to the field or road, to Mr. William Robinson's horse "General Washington," the first premium of $10.

For the next best stud horse adapted to the field or road, to Mr. Cottman's horse "American Perry, Jr.," the second premium of $5.

For the best thorough bred mare, to Mr. Hubbard's mare "Lady Granville," the first premium of $10.

For the next best thorough bred mare, to Mr. S. W. Woodhouse's mare "Allina," the second premium of $5.

For the best horse colt, between 2 and 4 years old, to Mr. Cardwell's "Tippecanoe," the second premium of $8.

For the next best horse colt, between 2 and 4 years old, to Mr. Cornelius Smith's "Harrison," the second premium of $4.

For the best filley between 2 and 4 years old, by Mr. W. L. Green's "Grand Duchess," the first premium of $8.

For the next best filley between 2 and 4 years old, to Mr. Cornelius Smith's iron-grey filley, the second premium of $4.

The special premium of twenty dollars, for such animals as have received the first premiums of this, or any other Agricultural Society, is awarded to Mr. Barber's horse "Bay Bellfounder."

The Committee regret that Mr. Barber's 3 year old colt "Stanley Eclipse," was absent from the ground at the time of the examination. They have since examined the horse, and think him worthy their especial notice and commendation.

Where premiums offered by the Society have not been awarded by the Committee, there were either no horses offered for competition, or none in the opinion of the Committee, entitled to the premiums.

For the best Durham bull, over 3 years old, they award to James Gowen the premium of $12, for Leander, from Dairy Maid.

For the next best Durham bull, to Manuel Eyre, Jr., for his bull Marmion, $6.

For the best bull between 2 and 3 years old, to George Martin, for his bull Tarby, the premium of $10.

For the second-best, to Dennis Kelly, for Comet, $3.

AYRSHIRE BULLS.

For the best Ayrshire bull, to John Struthers, for Wallace, the premium of $8.

ALDERNEY BULLS.

For the best Alderney bull, to C. S. Smith, for Adrian, the premium of $8.

For the second-best, to Mr. Suplee, for his bull Stephen Girard, $3.

BULLS OF OTHER IMPROVED BREEDS.

For the best, to Isaac W. Roberts, for his bull Montgomery, the premium of $8.

For the second-best, to F. Helmbold, for his bull Marmion, the premium of $4.

For the best Durham cow, over 4 years, to Dr. George Uhler, for Merion, $10.

For the next best, to Colonel R. Smith, for Bright, $5.

For the best Durham cow, between 2 and 4 years, to James Gowen, for Cleopatra, the premium of $10.

For the second-best, to Dr. George Uhler, for Camilla, $5.

For the best heifer, between 2 and 3 years, that has not produced a calf, to James Gowen, for Darby Kate, the premium of $6.

For the next best, to Mrs. Roach, for Kate, the premium of $3.

DEVON COWS.

For the best Devon cow, to Judge Longstreth, for Fancy, $8.

For the second-best, to C. S. Smith, for his cow.

AYRSHIRE COWS.

For the best Ayrshire cow, to N. Biddle, for his cow, Helen Mar, $8.

ALDERNEY COWS.

For the best Alderney cow, to G. H. Thompson, for Emily, an imported cow, $8.

For the second-best, to N. Biddle, for his imported cow, Flora McIvor, $4.

For the best mixed blood, to James Gowen, for Kitty Clover, $6.

For the second-best, to Samuel Cooper, for his cow Duchess, $3.

For the yoke of working oxen, to Henry Dull, $10 for his very fine oxen.

For the best ox or steer, to Isaac W. Roberts, for his red pied steer, of Durham blood, $10.

SPECIAL PREMIUM.

For such animals as have received the first premium of this or any other Society.

For the best cow of any breed, they award the premium of $20 to James Gowen, for his celebrated cow Dairy Maid.

Many fine cattle were offered and exhibited, in addition to those that have received premiums, and came, in some cases, in very close competition with those to which premiums were awarded. Several fine animals were excluded in consequence of having been honoured with premiums heretofore, and could only contend for the special premiums.

The Committee being thoroughly convinced of the usefulness of our exhibitions, would urge the owners of cattle to bring them forward on such occasions.

The Committee, after careful examination of these noble animals, Prince of Wales and Colostra, were unanimous in awarding the premium to Dennis Kelly's Prince of Wales.

CATTLE UNDER TWO YEARS OLD.

To Isaac Newton, of Springfield, Delaware county, for the best Durham bull, between one and two years old, Rodney, $8.

To Kenderton Smith, for the next best Durham bull, between one and two years old, Diego, $4.

To Robert T. Potts, for the best Devonshire bull, between one and two years old, Minion, Jr., $6.

To Nicholas Biddle, for the best Alderney bull, $6.

To Isaac W. Roberts, for the best Durham bull, between four months and one year old, Washington, $6.

To Morris Longstreth, for the best Devonshire bull, between four months and one year old, Johnston, $4.

To do. for the second-best Devonshire bull, between four months and one year old, Jackson, $2.

To Cornelius S. Smith, for the best Durham heifer, between one and two years old, Rowena, $5.

To Isaac W. Roberts, for the next best Durham heifer, Blossom, $3.

To James Gowen, for the next best Durham heifer, between four months and one year old, Miss Modle, $4.

To Dennis Kelly, for the next best Durham heifer, Calisto, $2.

To Samuel Cooper, for the best improved breed, Fair Helen, $4.

To James Gowen, for the next best improved breed, Maid of the Mill, $2.

To Henry Newman, for the best common stock, between one and two years old, Fanny Elssler, $4.

The Committee feel it their duty to add, that the young cattle which came under their notice, though not numerous, were of fine quality, and evinced great care in the selection of stock by their breeders. Besides those to which premiums were awarded, a number of excellent and beautiful animals were exhibited, and in several cases vied closely with their more fortunate competitors. The Committee regret that there were not more calves under one year old, to compete with those to which the premiums were awarded.

To H. Hill, for the best Berkshire boar, $4.
To Wm. Exley, for the best Berkshire sow, $4.
To James Gowen, for the best boar, mixed breed, $4.
To do. for the best sow, mixed breed, and six pigs, $4.

The Committee regret the small display of sheep, there being none which would come within the scope of the premium list, although there was a fine flock exhibited hy Isaac Newton, of Delaware county, of the Irish and Southdown stock, of very fine quality. The Committee are well aware, that for sheep, the district within the reach of Philadelphia, can compare with any portion of our country.

The Committee on Agricultural implements, respectfully report:—that the array in this department is numerous, and possesses much interest from variety, although comparatively few articles are of so recent invention, as to be now exhibited for the first time. Of that most important implement, the plough, all the specimens appear to have considerable merit, so far as a judgment may be derived from mere inspection, without actual trial in the field. As such trial is to be made under the supervision of a distinct Committee of Judges, this Committee would waive the expression of any opinion on the respective merits of the ploughs, did not the premium list of the Society seem to require a decision from them, prior to, and independent of, the experimental proof. They accordingly award:

To Mr. Dickson, of Chesnut Hill, the premium of $5 for the best plough.

To Mr. Charles Garrett, of Lower Dublin, the premium of $2 for the second-best plough.

A double mould, or hill side plough, invented by Mr. B. Moore, is ingeniously adapted to its intended object, and is recommended to the Society as a proper subject of the premium for new implements.

They further award:

To Landreth and Munns, the premium of $4, for the best straw cutter—being the one invented by Mr. Botts, of Richmond, Va., which is easy and efficient in its operation, and so constructed as to be easily adjusted and kept in repair.

To Mr. D. O. Prouty, the premium of $8, for the best display of implements, comprising almost every tool used by the farmer or gardener.

To Landreth & Munns, the premium of $4, for the second-best display of implements, embracing a great variety of useful machines.

Your Committee would also notice with commendation, the display of implements by Mr. E. Chandler.

The Buckeye plough, with iron beam, exhibited by Mr. E. E. Sprigg.

The furnace and boilers, invented by Mr. James Pedder.

The corn and cob mill, by Mr. V. Birely.

The display of agricultural products is not deemed sufficiently extensive to warrant the award of a premium, but favourable notice is justly due to Mr. John Turner, for some very good samples of Indian corn, mangel wurtzel, Valparaiso squashes, potatoes, beets, &c.

To Mr. A. Clement, for samples of mangel wurtzel, broccoli, cabbage, beets, &c.

To Mr. James Robinson, for some very fine stalks of celery, raised by him in the garden of James Thornton, Esq.

To Mr. John Ramsay, for an excellent sample of potatoes, raised from the seed, and therefore supposed to constitute a distinct variety.

To Mr. S. S. Ritchie, for specimens of corn, potatoes, turnips, beans, &c. Mr. Ritchie also exhibits several very large Malay capons, which are commended to the notice of the judges of live stock.

In conclusion, the Committee congratulate the Society on the evidence of a continued interest in their useful labours, evinced both by the success of the display in this department, and the notice it elicits from the great concourse of visitors.

And they cannot but believe, that those whose genius has prompted them to invent, and those whose pursuits require them to use the various implements exhibited, will equally derive advantage from the intercourse which these periodical exhibitions are designed to promote.

After the above premiums were awarded, the President, N. Biddle, proceeded to deliver the Annual Address to a large and attentive audience. We give it below:

The Agricultural Society of Philadelphia, have requested me to welcome you to this their annual exhibition. With their own private contributions, aided by the wise liberality of the legislature, they are able to offer rich premiums, and to excite so generous a competition among farmers, as to produce the collection which you are assembled to witness; embracing the choicest specimens of animals, some of the richest productions of vegetable nature, the most improved implements of husbandry;—and we hope to show you a contest for superiority in that noblest of all instruments of labour, the plough.

On all this the Society looks with great satisfaction; for having endeavoured, during nearly sixty years, to introduce and diffuse every improvement in the science and the process of husbandry, they rejoice in witnessing the extraordinary progress which Pennsylvania has made during that period, in every branch of farming. In no department is that advance more conspicuous, than in the introduction of those breeds of cattle, of which the present exhibition furnishes some examples. I think we have now reached a point where the introduction from Europe, of animals, is no longer necessary to the perfection of our present stock, and that we may safely rely on what we possess, since the very best breeds are already numerous and moderate in price.

Take, for example, the cows. There is no breed of any celebrity in Europe that are not attainable here. There is the short horned Durham, that race created as it were, by refined and judicious crossing, adapted alike for the dairy and the market;

the Devons, probably the first domestic animals imported into New England, and who, at the distance of two centuries, retain the characteristics of the parent stock, with whom its relationship is renewed by late and numerous importations, fast walkers and stout workers too. The Ayrshire, a small round bodied, and compact race, easily kept, and claiming to be adapted alike to the knife and the pail. The Alderneys, a rawboned, ungainly race, not easy to fatten, since all its food goes to swell its copious and very rich supply of milk.

As to horses, our pursuits as farmers bring us less in contact with the highest bred races of this noble animal. Yet I am satisfied that the horse is destined to have the full develepement of his qualities in no country more than this.

He comes originally from a dry, warm climate, and a clear sky. He finds them here, but they are wanting in the moist atmosphere and clouded skies and rich pastures of England; and accordingly the highest bred English horses require to be recruited by foreign blood; and already, by the stop watch, they are outstripped by their descendants here.

We possess sheep of various kinds, and in great abundance. Strange examples of the caprice of popularity. When the Spanish troubles first drove the merinoes into this country, they were high priced and high fed, as if each had a golden fleece; but they could make no progress, till at last they lost all imaginary value, became objects of dislike and even disgust, and now they are universal. We have plenty of Merinoes, and our present want is of the long wooled Leicester breed, to cross with the Merino, for the purpose of manufactures. With regard to swine, the public favour seems to decide in favour of the Berkshire, Hampshire, Lincoln and similar stocks, the qualities of which have been naturalized in our own Chester county breed. And thus we wish you to go round the whole circle and see the variety and the beauty of these specimens, and then reflect how much more economical it would be to stock our farms with cattle superior in quality to what we commonly see. In animals, as in almost everything else, the best is, after all, the cheapest, and the difference in the first cost of a good and a bad animal, is soon made up by the superior productiveness, upon the same food, year after year. One of the great advantages which the Society promises itself by this exhibition is, to place within the reach of every farmer the means of obtaining, at a small cost, the most valuable animals.

Nor let us pass without notice this collection of roots, turnips, sugar beets, ruta baga, mangel wurtzel, which ought to enter very largely into our farming. It is strange how things so lowly acquire national importance. The best farming is that which will give the greatest mass of sustenance to animals—since the less land required for animals, the more can be given for the maintenance of human beings. That fine farming region, England, had reached the limit of its power of supporting animals—since it turned to the root culture, it more than doubled, or quadrupled its power—and now, odd as the mingling of such dissimilar notions may seem, it is scarcely an exaggeration to say, that England's power is based upon its iron, its coal and its turnips. Then, that beet, which the commercial jealousy of Napoleon endeavoured to raise to the dignity of the sugar cane, which at this moment, yields to France more than sixty millions of pounds of good sugar, and has now become so incorporated into the French agriculture, as to divide the government of France between the encouragement of the foreign sugar cane and the domestic sugar beet. To us the question is unimportant, since sugar is so cheap in this country, as to leave to us the sugar beet as an excellent food for our cattle.

Examine too, these ploughs. For some thousand years men have been using the plough, and its improvement has been the companion of his own refinement. At first, a mere sharpened stick, then, by degrees, strengthened, then ironed, then a heavy cumbrous engine, led on by four, six, ten horses; then the refinement of simplicity stripped it by degrees of these incumbrances, a horse, a pair of horses, were successively withdrawn, as the machine is rendered lighter, till at last we have now reached almost the perfection of that instrument in yonder specimens. The great purpose of the plough is to come as near as possible to the spade; not merely to open the sod, but to turn it over, to make what was on top last year take its place at the bottom this year, and rot, till it is wanted. There are ploughs here which perform *that* better than any ploughs in Europe, and there is one especial instrument which we ought to remark, the subsoil plough. Our ploughing is generally too shallow. We scratch the surface, and then extract it by frequent cropping; whereas, if we could get lower down and loosen the surface below, we should bring into play a fresh soil, and almost double the extent of available ground. Thus in light soils we get fresh food for the root crops, and on the clay soils we open the lower stratum, and in off the water which cannot now pene- e the stiff sod. This subsoil plough, of ich specimens will be exhibited to you in ual operation, is, I think, one of the best rovements of the last few years, and as ong our farmers temperate habits are versal, I hope that instead of deep drink- , they will take to deep ploughing.

nd now, let me say a few words on the eral subjects of farming—they shall be re hints on which I wish you to reflect en we separate, and perhaps you may n them to some advantage.

n this section of our State, our garden- is better than our farming. No one can without satisfaction the great improve- nt in our gardens, which furnish such an ndance of excellent and cheap fruits and getables, and flowers. Let us see if we nnot borrow something from that younger er of farming. Now, what is the secret successful horticulture? Is it not the rough cultivation of a small piece of ound, which, well manured, well worked, ows out its treasures with the most pro- al profusion. What would a gardener with fifty acres? He would concentrate his force upon ten acres, and sell the rest. ell, is not the same law applicable to farm- ? and that brings us to the point that all farms are too large, that is, they are be- nd the means of the farmers to cultivate em well. If our farmers want to make ney, they had better sell half their land, d employ the proceeds in enriching the ner half.

In Pennsylvania there is a great deal of ney invested in farms—but very little ney employed in farming; this is a capi- error which runs through our whole sys- n, though a very natural mistake, where nd is really cheap and labour nominally ar. The labour is the same as if a mer- ant were to spend all his money in buy- a large store, and then have nothing to rry on his business; for, after all, land is ly a place where farming may be carried , as a warehouse is a place where mer- andize may be sold—but fields are not ops, just as shelves are not goods, it is hat we put in them or put on them, that ves profit. If the land be left to itself, it ill run to waste in a few years, just as idle- ss in the human race is sure to degenerate to vice. Both can be kept useful and althy, only by constant action. We some- mes rely on nature, whom we call a boun- ful nurse, but the nurse herself must be fed fore she can give nourishment to her chil- en. No farmer, therefore, should have ore land than he has the means of culti- ting well, and if he does cultivate them well, they will be sure to yield an ample return. It is not land that gives profit, it is manure—it is lime—it is marl—it is the sweeping of stables—it is the scraping of ditches mellowed by lime; these, humble though they seem, are the objects of profitable expenditure. You all remember the cock in the fable, who found a jewel in a dung-hill, and did not know its value; rely upon it, that in the very centre of every large heap of manure, there lies a hidden jewel which a farmer can always find, and convert into gold.

The mention of the barn yard, reminds me of a circumstance of some interest to farmers, from its presumed connection with the health and comfort of their country life. In many parts of the country autumnal fevers prevail, and in the effort to explain what in the present state of our knowledge is inexplicable, it has been asserted that these fevers are caused by exhalations from decaying vegetables; and accordingly the latest immutable truth in medicine is, that the decomposition of vegetable matter is the cause of country fevers. If this be so, we ought all to hasten home and clear out our barn yards.

On every farm in this country, a spot is selected, called a barn yard, into which the farmer hauls all the leaves and weeds, and vegetables he can scrape together—to these he adds all the decaying straw and litter of his stables; he puts all this mass into the sunshine, and from time to time, he turns up the whole heap, in order that every part of it may be well rotted. All his people work in it, all his family inhale its atmosphere, and they ought, according to the received theory, to die under these pestilential exhalations. Yet they not only live, but thrive, and it probably never entered into the fancy of any human being, that he was made sick by working in a barn yard. Now if this very laboratory of decomposition of vegetables is a healthy spot, what influence can we ascribe to the same cause in forests of hundreds of miles in extent, where the leaves remain for years in the shade, without any decay at all. Let us hope that our medical friends may adopt some new theory, that may leave us to work in our barn yards without the dread of pestilence.

And as you may use it healthfully, use it freely. Never let any thing grow in your fields but what you put there, and what you put there make it grow richly. For instance, as you came here this morning, you passed many fields of Indian corn—but after all, you saw more weeds than corn, and weeds going to seed, and exhausting the ground more than the corn itself. Now if we will not keep the weeds out by ploughing, we ought, at least, to give the corn a larger share of the field, so as to have twice the quantity of corn, and only half the quantity of weeds.

But the most serious grievance in our farming, and one to which I ask your special attention, is our very bad system of fencing. When the country was first settled, it was natural in felling the timber, to enclose with the logs, the clearing, just as in New England, the stones on a farm may be as well formed into a fence, as carried further. But as wood became scarcer, the expense has increased, till now it has become a real oppression. I have heard of a farm surrounded by a cedar fence, which would actually sell at auction for more than the farm itself. A most respectable member of our Society has assured me that the fencing of his farm, of perhaps 300 acres, cost him 5,000 dollars. The extent of this burthen in Pennsylvania, will surprise you all, as it astonished me when I came to make this calculation, which is of course very rough, but as I give the elements of it, you may rectify its errors.

The whole surface of Pennsylvania is said to be 28,000,000 of acres. Deduct for unenclosed lands, what seems to be a large allowance, say 18,000,000, and there remain enclosed in a post and rail fence, 10,000,000.

The size of the lots into which they are sub-divided, varies; near large cities and towns, the lots are of a very few acres—in remoter places they are larger; but for convenience, I have assumed as a basis of calculation, that the sub-divisions of a Pennsylvania farm are on an average, about 10 acres.

Now, to enclose a field of 10 acres, you have on each side 660 feet, and calling a panel 10 feet, you have 66 panels on each side, or 264 panels to go round the whole—but as every panel serves for an enclosure on each side, the number of panels should be reduced of course to one half; so that, upon a large scale of enclosure, every 10 acres require 132 panels of fence. Now 10,000,000 of acres, thus divided into fields of 10 acres, amount to 1,000,000 fields, each of which requiring 132 panels, the whole *amount* of panels is 132,000,000. The price of a panel varies in different parts of the State. Here it would cost one dollar a panel. But taking the average price at eighty cents a panel, we have $105,600,000, or in round numbers, $100,000,000.

Consider now the interest on this outlay, the wear and tear of the fence, and that the whole of it will not last more than 10 or 15 years, and you have as the annual tax upon agriculture in Pennsylvania, a sum of 10,000,000 of dollars. If this estimate appear still too high, reduce it one half, and yo have still a tax of $5,000,000.

Look at it in another point of view. Se how many post roads, private roads and lane there are, with a row of fences on each sid —see how every farm is cut up into littl divisions of a few acres—and the result wi not vary much from what I have state They say that every man's house is his castle—one would think every man's farm wa his fortification, so cut up is it with thes piles of logs, like so many entrenchment Indeed the best use of a fence that I know is that at the battle of Bunker's Hill; th farmer warriors brought two fences togethe and filled the interval with new hay, as a impromptu rampart. But in times of peac they are absolute nuisances.

For what is the use of all this fencing In my judgment it is of no service at al We might get rid of the whole expense it. We are so accustomed to be shut up i those wooden pens, that we can scarcely understand how we are to do without then But we can surely do without these fence just as all the rest of the world does.

I remember a friend of mine from th South telling me, that until he left hom he believed to have the fever and ague, wa a necessary infirmity of human existenc to which every body was subject from h birth. So among some nations a persona deformity becomes first general and the fashionable, till every man is supposed to b an ugly fellow unless he has a goitre or humpback, and we think that all the rest the world must have wooden fences. Thu a gentleman of Pennsylvania once told m that on his return from Europe he was conversing about his travels with an old German friend, whose ideas of luxury wer confined to what he had long enjoyed unde the old fashioned porch, or stoop, and he sai to him,—"Well, I suppose the king of England must have a most beautiful stoop."

Go over all the continent of Europe, tak Portugal and Spain, and France, and Italy and Germany, there are no such things a these fences. The lands are divided b stone marks, or other indications of boundary, which are just as sacred as a post an rail fence. The cattle are generally kep up in barns and other places, where thei manures are husbanded, instead of bein wasted, as they are by roaming over field If they are occasionally put out in field they are tethered, or watched by boys dogs, so as not to intrude on their neighbours. Why cannot we adopt the sam system? The difficulty seems to be the roa cattle. Everywhere else people go on th inciple that no one's cattle have a right intrude on his neighbour's land. Here seem to think that it is not the owner's siness to keep his cattle in, but the neighur's business to keep them out. Accordgly all the highways and lanes are infested cattle turned out to graze on the public ads, which were made for travelling, not pasturage—a set of land pirates, who go ying about for any weak place in some nce, and not only invite themselves in, but nerously introduce all their associates. ne necessity of keeping out a bad cow, us subjects the neighbours to an expense ual to a thousand cows.

What is of vital importance, too—scarcely lay passes without our hearing of serious cidents on our rail-roads, caused by cattle. ne law is, I believe, quite sufficient to proct enclosed lands, if the farmers will only e that it is executed; and if the State will otect our citizens when travelling on its il-roads, by prohibiting this roaming about cattle, I have no doubt that millions might saved to the farmers, and all these rickty, misshapen sticks of dead timber disapar, regretted only by the politicians, who ould lose that finest attitude for calculaon—sitting on the fence.

Having spoken of the improvement of our rms, let us not omit a much more importit subject—the improvement of our farms. In the stirring competition of all asses around them—in the increased dision of knowledge, and the general acvity of mind which now pervades all soety, the farmers must maintain their standg by the same means. Unless they cultiite their minds—unless in the intervals of ieir labours they pursue the studies which ialify men for public usefulness, they will distanced in the race of honourable amtion, and lose that high place in the public stimation and the public councils, to which iey have a right to aspire. And certainly, ever was the advantage of their position iore conspicuous than at the present hour. n the general desolation which has swept ver the country, the only interest which as not been visited by the sternest reverses, that of agriculture. Undoubtedly, the eople who have suffered least, are the farmrs, whose deep roots in the soil have enbled them to withstand the tempest.

The same gentle vicissitudes of the seaons have passed over them—the same abunance has blessed their harvests—and their ndustry has been rewarded by gains scarcey less in name, and really greater than beore. If they have not enjoyed the feverish xcitements, or the luxurious amusements f the dwellers on pavements—they have been spared many an anxious thought and many a heart-ache, not heard, but not the less felt in the din of cities—let these things reconcile farmers to their station; let them enjoy in peace the repose, the abundance, the thoughtfulness, the sobriety of their own healthy existence, without wasting an anxious thought on their more active and ostentatious, but not more happy brethren—for we may now repeat with even more truth than the Poet Farmer of antiquity did nearly two thousand years ago:—"Happy—too happy farmers—if they only knew their own blessings."

To Cook Cucumbers.—The Editor of the American Farmer furnishes the following receipt, which he says gives one of the most "palatable vegetable dishes, with which the table can be garnished." Pare off the rind, then cut the cucumber into slices *lengthwise*, dust either side of those slices with corn meal or wheat flour, pepper and salt them to please your taste; this done, fry them brown, and you will have one of the most delicious dishes that you can imagine, combining in their flavour those of the oyster-plant and egg-plant. Of their healthfulness, thus cooked, there can be no question, and of their palatableness, it is only necessary that you *try them*, to say with us that they are exquisite.

A Late number of the Quarterly Journal of Agriculture contains some interesting experiments in manuring potatoes, carried on by Mr. Fleming, of Barouchan. The weight of produce of 18 yards of potatoe drill, to which farmyard manure was applied in the usual manner in each case, was as follows, according to the mode of top dressing:—1st. No top dressing, 77 pounds; 2d. Sulphate of Soda, 86 pounds; 3d. Nitrate of Soda, 93 pounds; 4th. Sulphate and Nitrate of Soda, mixed, in equal quantities, 124 pounds.—The quantity of Sulphate and Nitrate used altogether by Mr. Fleming was 150 pounds, costing 21s. 6d, the return for which was upwards of 8 tons of potatoes.

The "Cultivator" says that Claudius Allen, Esq., of Cheshire, Connecticut, last year sheared from one sheep, one year old, 14 pounds, and from three sheep of the same age, 33½ pounds of wool. This year, from eleven ewes and one buck, he cut 88 pounds: we are not told of what breed they were. It is also said, that J. L. Dean, of Union Springs, N. Y., has a Leicester lamb, which at eight weeks old, weighed 75 pounds, and at twelve weeks, 93 pounds.

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

PHILADELPHIA, ELEVENTH MONTH, 1842.

THE season for reading, among our agricultural friends, is now here. Well do we recollect the days of our boyhood, when the long winter evenings were anticipated with no small degree of satisfaction. They were looked to, as the period, when, without postponing out door duties, an indulgence in a love for books, could be luxuriated in, to our heart's content.

The season of spring is a delightful one to the farmer. There is the bursting forth, almost of a new nature, around him. Bird and beast, and flower, give manifestation of newly awakened impulses. The first starting of the plough, and the smell of the fresh earth, throw elasticity into the step, and fill the bosom with hope. The summer too, with its flowing pastures,—its new made hay,—its waving grain, and its thunderings and lightnings, yields its full share of enjoyment. And autumn, from whose falling leaf we may read so deep a moral,—the period for garnering the crops, and consummating the hopes of the season, with the ever-varying beauties of our native forests, which it has been said, no pencil has yet been able to paint, will not yield in the amount of its calm and substantial pleasures, even to the exhilarating influences of spring. Winter, with its storms, its leisure, and its long evenings, opens to the farmer opportunities for improvement, which, when properly appreciated, are productive of important results. Books, whether to enlighten him with particular reference to his calling, or on those subjects of more general inquiry that present themselves to an intelligent mind, are now so cheap and easy of access, that we have sometimes been induced to conclude that the husbandman, in the quiet seclusion of his fireside, had privileges which the citizen might almost envy. On looking, a few days ago, over the counter of KIMBER & SHARPLESS, under our own roof, attention was arrested by the handsome variety of books, particularly adapted to the wants of our agricultural readers. Among them we noticed Downing's Landscape Gardening, and Rural Architecture—his Cottage Residences,—and the Theory of Horticulture, by Professor Lindley, editor of the London Gardeners' Chronicle. The first two are American works, and the latter, having been edited by A. J. Downing and A. Gray, is also adapted to this country. These three works, while they contain a great deal to interest and instruct the intelligent farmer, are yet more particularly calculated to meet the wants of the man of full means. The wholesome principle is inculcated throughout, that true taste is an excellent economist, delighting to produce great effects from small means. Loudon's Encyclopedia of Plants, and that of Gardening,—two splendid works, lately imported, were also among the number. The American Farmers' Instructor, by F. S. Wiggins, the originator of the Farmers' Cabinet—Dr. Darlington's Flora Cestrica, containing an enumeration and description of the plants of Chester county—Liebig and Johnson's late celebrated works on Agricultural and Animal Chemistry—Mason's Farrier—Boswell's little work on Bees, Pigeons, Rabbi and the Canary bird, as well as his Poultry Yard, bo particularly adapted to interest our juvenile farme helped to swell the list.

While glancing over these volumes and many oth on the counter, which our space will not allow us name, the thoughts were carried back in a twinkli to days long past, when hopes were indulged and p vileges enjoyed, which made life delightful. The fa yard—the books, and the long evenings of that peri have brought up "sunny recollections," and we a our readers to excuse us for having almost involun rily given them expression.

"THE PRINCIPLES OF CHEMISTRY, *prepared for the* *of Schools, Academies and Colleges, by Daniel B. Smit*

This work has just been published by Uriah Hu and is for sale at his store, 101 Market street, and also this office. Perhaps it would be sufficient to have ma the above simple announcement. Yet, inasmuch the attention of the farmer is now so frequently call to the composition of the soils he cultivates, and t food upon which his plants thrive, it has become app rently more necessary than formerly, that he shou look a little more closely into the chemical nature the substances with which his business is continua bringing him in contact. Although, as its title i ports, this book has been prepared more particula for the professed student; yet, from the nature of t subject, and the able manner in which it has be treated, we find much to interest the general read The style, as those who know the writer, would an cipate, is as Dr. Mitchell has observed of it; "chas perspicuous, and concise." The arrangement appe to us judicious, and the investigations and conclusio show the writer to be *at home* in his laboratory.

The new Chemical Nomenclature, as framed and i troduced by the illustrious Lavoisier and his coadj tors, sixty years ago, has always claimed our admi tion, as the most beautiful example of an approach a universal and strictly "philosophical language whi has ever been presented to the world." The langua of algebra, it is true, is general, so far as it can be a plied; but it has reference to quantities only, not things—to ratios, not to the constituents of bodi This language of Chemistry, has often reminded us that alphabet of human thoughts—that universal, p losophical language, which Leibnitz and some othe have dreamed of, as being likely, one day. to prove powerful agent to assist the reason, the invention, a the memory.

IN another column will be found a list of the pren ums awarded by our Agricultural Society, as well the address delivered on the occasion, by its Preside This is well worthy an attentive perusal. The sou principle is forcibly inculcated, that in animal stoc the best is the cheapest, and that the concentrati of the farmer's means upon a comparatively sm number of acres, is greatly preferable to their dis pation over broadly extended fields. We would pa ticularly invite attention to the remark, in whi there is doubtless too much truth, that in our count there is a great deal of money invested in *farm* and but very little in *farming*. We are too apt to fo get—indeed, it would seem as if we had never y arned "that it is not *land* which gives profit,—it is anure—it is lime—it is marl." The calculations in elation to fencing in Pennsylvania—and they would pply equally to New Jersey—even after reducing them ne half, throw open items of expenditure in the shape f interest and natural decay, that are really startling. Ve have even heard it said, that the stone fences of hode Island, have cost more than the whole island ould sell for. Yet here, with our abundance of timber, will be long ere our farmers will begin to think of e "tethering," or the "watching" that is widely prac-sed on the Continent.

We feel unwilling to close this brief notice without ying we have read the last paragraph but one, with articular interest. It is unquestionable, that "in the irring competition of all classes around him—in the creased diffusion of knowledge and the general ac-vity of mind, which now pervades all society, the rmer can only maintain his standing, by an attention the same means," which others are so successfully ying hold of. He must cultivate and enrich his mind ith reference to his business, as well as his fields, and ever lose sight of the truth, either in relation to him-elf, or his children, that in agriculture, no less than mechanics, "knowledge is power."

THE Address of James M. Garnett, Esq., before the EWCASTLE AGRICULTURAL SOCIETY, at its late ex-ibition, has been neatly printed in pamphlet form, nd affords another instance of the wholesome truths hat may be conveyed on occasions of this kind. While he farmer, who would succeed in his vocation, must e open to conviction and ready to give fair and accu-ate trial to experiments, which hold out rational pro-ises of success, he is cautioned not to hazard more bour or money in making them, than a sound discre-ion will justify. A hint is thrown out to Agricultural ocieties, that in offering premiums, they be regulated y the principle of encouraging nothing that has a ten-ency to render tillage and pasturage more showy than seful—more costly than profitable. To obtain the reatest and most beneficial results, at the least cost f time, labour and money, the speaker suggested, hould be the object of all agricultural premiums. arly rising—proper employment of time—the vigilant ye and active foot of the master, are enumerated as mong the most effective means for the improvement f his farm. Woman, too, as well she might be, was emembered by our veteran orator. Our wives and ur daughters were reminded, that their most estimable dornment, was a knowledge and love of their duties; nd that their most honourable occupation is in making hat home happy, in which it is their high privilege to ove, as the "ministering angel."

IT is announced in a late number of the New Gene-ee Farmer, that its proprietorship will at the end of he year, pass from the hands of our friend, M. B. ateham, into those of Henry Colman, the present ditor. This has been one of our most ably conducted gricultural papers. We are pleased to find its price s to be raised from fifty cents to one dollar, and hope, hat with this reasonable addition, its publication at he end of another year, may not prove "a serious oss." As the editor remarks, no righteous master would require him to "work for nothing, and find himself." We much regret to learn that one of the causes for the retiring of the present proprietor, is *ill health.*

THE editor of the Farmers' Register certainly deals with a liberal hand with his friends. He will please accept thanks for the package received by the "Leo." Its contents have been distributed as directed.

In the Register of the Ninth month, will be found a detailed account of the editor's recent examination of some of the marl beds in Gloucester and Salem counties, N. J. Copious extracts from it, will appear in our next number. They have been crowded out of this by local matter, connected with our Agricultural Society.

THE late Annual Fair, Cattle Show and ploughing match of THE NEW HAVEN COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETIES, appears from the Farmers' Gazette, to have been a very spirited affair. The working oxen exhibited, were driven into the city in teams, numbering from 20 to 132 pairs. There were 513 pairs on the ground. The towns of Orange and Hamden, furnished respectively, trains of 120 and 132 pairs, all in fine working order. A couple of twins, five years old, owned by John Todd, of North Haven, were so remarkable for their size, form, colour, discipline, power, and similarity of appearance, that the whole world is challenged to produce their equal. Professor Silliman is the President of the Agricultural—and Dr. Monson of the Horticultural Society. Professor Olmsted was the orator of the day.

SINCE the communication on page 124, in relation to lamps for burning lard, was in type, a couple—a glass and a tin one adapted to the purpose, and patented by Southworth, have been left at the office. We have for several evenings used one of these lamps, and it certainly operates well, yielding a fine clear light. A somewhat broader base to the bottom of the tin one, would be an improvement. As to the cost, compared with oil, we have formed no opinion. We learn that they are for sale at Scattergood, Haverstick & Co's, No. 68 N. Third street.

THROUGH the liberality of the publisher, S. S. Haskill, 150 Fulton street, New York, the first two numbers of "The Farm House of the nineteenth century, or Encyclopedia of Practical Agriculture," have been placed upon our table. We have found time only to glance hastily over them, and to mark the great variety of agricultural matter they contain. Moisture and drought, temperature, electricity, climate and soils, are among the prominent subjects treated of. The work is translated from the French, by Elizur Wright, Jr., and will be published semi-monthly, in forty Numbers, making four Volumes, at $10, or $7 if paid in advance. It will contain more than 2,000 engravings, and embrace a "Complete and methodical course of Rural Economy."

A FEW very fine ears of perfectly white corn, have been left at our office by Aaron Ballangee, of Bordentown, N. J., which, to the lovers of nice mush, will certainly appear inviting. He calls it the *Kentucky* *gourd seed.* A few years ago he procured a small ear from that State, and by care in the selection of his seed, the produce is now fine and large, and beautiful to look at.

Large Veal.—New Jersey in the field again. The "Constitution" of Woodbury states, that Ephraim S. Coles, of Pilesgrove, Salem County, slaughtered on the 28th ult., a calf raised and fed by himself, which is probably unrivalled. The live weight was 674 pounds, and when *dressed*, 440 pounds;—58 pounds of fat were sold off the meat. The calf was three-eighths Durham, and was calved on the 13th of Third month last.

Judge Longstreth will please accept thanks for the interest manifested by a translation of the letter from Germany. It came too late for this number, as did also the communication of our friend, F. W. from Carlisle.

☞ Notices, which are essentially advertisements, are sometimes received, with a request that we would insert them. Although the Cabinet is not professedly an advertising paper, the proprietor would be willing to deviate a little from the plan which has heretofore been pursued, and insert to a very limited extent, short advertisements, the subject matter of which, may be in character with this paper. The terms will be one dollar for each insertion of ten lines or less, and so in proportion for each additional line. The money to be paid in advance. An advantageous medium will thus, we think, be opened for our agricultural friends to make their wants known, as well as to have them supplied.

We may perhaps, with propriety use this opportunity to acknowledge the punctuality of those of our subscribers who have paid their dues. We may also embrace it to say to others, that it would be particularly convenient to the operations of this office, if they would remember the facilities which the privileges and courtesies of the respective post-masters offer for the transmission of the small sums due us. The papers of some have been running on unsettled, for a couple o years and more. Will they, by attending to a smal matter of duty on their part, enable us satisfactoril to perform some of ours.

A FARM WANTED.

A practical farmer with a small family, competen to take entire charge of a respectable farming estab lishment, where the interest of the employer will b the main object, wishes a situation. One where im provement is the order of the day, would be preferre Location not particular. For further particulars, in quire at the office of the Cabinet.

The quantity of rain which fell during the Tent month, (October,) 1842, was nearly one inch and thre quarters. .... 1.712 inche

Pennsylvania Hospital, Eleventh mo. 1st, 1842.

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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JOSIAH TATUM,
PROPRIETOR AND PUBLISHER,
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From The Farmers' Register.

Some account of the green-sand earth of Gloucester and Salem Counties, N. J., and the effects as manure.

It will be recollected that in the 2nd No. of our current Volume, a short account is given of a visit which one of the editors, in company with Edmund Ruffin, the able conductor of the Farmers' Register, published in Petersburg, Va., paid to some of the marl beds near Woodbury, N. J., in the early part of the Ninth month last. In the Register for that month, the editor has given an account in detail of this visit, as also of that which he subsequently made to similar interesting deposites in the vicinity of Woodstown, in Salem county. He had there also an opportunity of witnessing numerous evidences of the great effects resulting from the application of the green-sand marl to poor and worn out soils, within its reach. We have been much interested in reading the article, and exceedingly regret that our limits will not allow us to transfer the whole of it to our pages. In the extracts which follow, we are fearful that we have not done justice to the author, or to our readers. We have, however, endeavoured to do it, so far as the necessity for abridgment would allow. The author, we know, will excuse any deficiency—to our readers, we would say, buy the book.

Ed. F. Cab.

The New Jersey green-sand earth, and the beneficial and wonderful effects produced by its use as manure, have long been subjects of interest and curiosity to every person accustomed to read or to hear of the progress of agricultural improvement in the United States. There were other additional reasons, (which will be obvious to all readers of the past volumes of the Farmers' Register,) which made me take especial interest in this subject, and to seek information thereupon, as I have done for a long time past, from every source offered by publications.

Deeming, from everything yet read, that there would be no means of obtaining the correct information desired, except by personal examination, I determined to visit the green-sand region of New Jersey; and to make this personal inspection, and to have opportunities for making personal inquiries, formed the sole objects of a journey from my distant place of residence.

[Here follows the account of the examination in the vicinity of Woodbury, which as we have already noticed it, and for brevity's sake, we are obliged entirely to omit. From Woodbury he returned to Philadelphia, where he remained a few days; afterward he says:]

I proceeded to examine another and a much more improved and important district of New Jersey. This is the country surrounding and neighbouring to Woodstown, in Salem county.

I had occasion to congratulate myself as to the hands into which I fell. My first used direction led me to David M. Davis, a resident of the village, and his kind attentions and hospitality left me nothing to desire, either as to the means for obtaining the best information, or for any other accommodation and comfort that his house and other means so abundantly afforded. In addition to all that he could tell and show me of his own operations, he carried me to as many of the most interesting points for observation as could be visited during my short stay, and enabled me to see and to inquire of many of the farmers most experienced in the use of green-sand earth.

Our first visit was to the diggings in Woodstown. They extend over three or four acres, all of which space has been excavated, and the green-sand earth removed. There was no digging then going on there, but plentiful signs of the extent of recent work in many large heaps, or mounds of conical shape, formed of the excavated earth, standing to dry somewhat, or wait until their different owners, who had either dug them or bought them of the labourers, should find it convenient to haul the earth to their farms.

At another locality, visited next morning, there was a scene of much greater activity seen in numerous labourers employed in every different operation of the business.

This locality embraced the several adjoining diggings of Richmond Dickenson, Henry Allen, and Allen Wallace. It was indeed a busy and spirit-stirring scene; and the operations were so interesting to those engaged at work, and to me as a spectator, that I should have been glad to have spent some days there for the mere gratification thus derived, and for full opportunity of conversing freely with the industrious and zealous operators.

The proprietor of a bed sometimes digs and sells the green-sand by the load; but the more usual course is to sell it by the square rod (16½ feet square,) to labourers, who uncover the earth, dig it out, and place it in a single high mound, just far enough from the pit to be safe, and then sell by the heap to the neighbouring farmers. The price by the load from such mounds, is fifty cents, at the Woodstown diggings and other beds of highest reputation; and forty cents at others, (as Cawley's,) which, even if as good, have yet to be as well established in the estimation of the farmers. However, as the quantity in a heap, yielded from one pit, is estimated with considerable accuracy, the sales are generally made by the entire heap, at a somewhat less price, say forty cents the load, by the estimate of the heap. The covering earth is thick, say usually varying from 8 to 12 feet; and one place seemed to me 16 feet. This the labourers or purchasers by the rod have to dig off, and all down to the manure that is not used to fill the adjoining and last made pit, must be removed in carts some fifty or more yards. The excavation of the green-sand earth is never begun except in the morning, and by a sufficient force to sink it as deep as can be done in the course of the day. When sunk some 10 feet in the best earth, the increase of water, and the liability of the sides to cave in, usually compel the work to be stopped, and all below that depth is lost. The proprietor sells the privilege of digging, at $6, $8 or $10 the rod, according to the greater or less difficulty of the work, or the less or greater amount of good earth to be obtained. In some cases (in Gloucester,) where there was very little covering earth to be removed, the price has been as high as $16 the rod. It usually requires sixteen able men to dig out a rod in a day, and heap the earth excavated. A job which I saw in operation had twenty-three hands, three of them being boys; but this was unusually troublesome. Men hired to dig in the pits, are paid 75 cents a day if found in food, or $1, or $1.12½, if finding themselves. It is heavy labour, and the greater part is performed in mud and water.

The heaps of green-sand earth when first thrown up from the pits, appear black, or at least a very deep bluish black. After drying on the surface, the colour is grayish or bluish green, and after long exposure, on the outer surface of some, the earth becomes of a vivid green. This last is not liked, and the earths showing it most, are thought not to be among the best. But I saw it first, and most distinctly, at Heritage's diggings in Gloucester, of which the manure is in high repute, and very rich in green-sand, by the geologist's reported analysis. The many large conical heaps, of regular form and nearly equal size, but varying in colour according to age, from deep black to bright green, present to the eye a novel and striking display at each of the principal diggings.

There is another general, if not universal accompaniment, which particularly attracted my notice, as I had seen and appreciated the same at home in our green-sand earth. This is gypsum which is left on the surface in a white, tasteless powder, like a dusting with coarse meal, on the outside of the drying heaps of earth. I learned that the workers and users of the earth, though not knowing what this white powder is, had formed the opinion that the appearance was most decided in the earths best for manure. It appeared to me more abundant on the heaps of Allen Wallace—though his pits have been but recently opened for sale, and the earth has not yet acquired so much credit as that of Woodstown and some other places. On part of Heritage's earth, uncovered, but not dug out, the exuding fluid gypsum had dried and formed a thin crust. I cannot but believe that this gypsum is an ingredient sufficiently abundant and general in most, if not all of these earths, to add very considerably to the other and unknown causes of value as manure.

As all the diggings present the same general appearance, it would have been a waste of my limited time to visit and examine all, even of those near to Woodstown. When about to leave the last one, I asked its proprietor, Allen Wallace, what was the number of farmers taking from his diggings this season. He said about 30 persons; and he supposed that the next proprietor, Henry Allen, was supplying about as many; and the next, Richmond Dickenson, furnished considerably more than either of them. I thence computed that the three, which are all close together, and forming what I count as one locality, are supplying this season, about 100 different farmers. There are six localities of diggings in this neighbourhood, all within a circle of six miles diameter, of which Woodstown is the centre; and all these are supplying green-sand earth largely. Add to this that there are sundry other diggings in this and the adjacent county of Gloucester, all in active operation, and some idea may be formed of the number of farms on which this improvement is now in progress. This evidence of very general appreciation would be enough to prove great value, even if the cost were less than half its actual amount.

The general rotation of crops in this part of the country, is, 1, corn, on sward or old grass land; 2, oats; 3, wheat; to which all the manure is applied in September, before sowing, and on which clover and timothy seeds are sown; 4, 5, the grass mowed and afterwards grazed; 6, pasture. The green-sand earth is generally given as top-dressing on clover, the autumn and winter after taking off wheat. The quantity of the green-sand earth applied, is usually ten loads of a wagon and two horses, and when near and cheap enough, twelve or fifteen loads are often applied. Every man would prefer to give more, but for the cost. Nearly all the persons of whom inquiries were made, concurred in the opinion, that the effects were permanent, so far as their experience or information extended; and most of them had personal experience from 10 to 15 years. Still, second dressings are given, and in some farms the third dressings have been applied, and with new benefit at each repetition. Some few doubted the permanency of effect. Dr. Whitall, of Burlington county, informed me that it was supposed there, that the effect lessened after three years.

As elsewhere, the best effects found here, are on the clovers and buckwheats; the least on wheat. Wherever applied first for, and just preceding the latter crop, very little, if any benefit has been seen. On buckwheat, the effects of the green-sand earth are very remarkable, and it is a general practice to apply it for that crop; and being done for this crop mostly by poor men, and on poor land, it is put at not more than five loads to the acre. On part of the very poor land bought by David M. Davis, for $5 the acre, he applied the earth at the rate of ten loads, for buckwheat. The land was in Indian grass (broom sedge) when ploughed up for the buckwheat. The crop made, was sold at $1 the bushel, which is an unusually high price; and the amount was enough to pay for the whole expense of applying green-sand earth, (bought and carted five miles,) the cultivating and securing the crop, and also the purchasing of the land itself. Mr. William Reeve told me of an experiment made by a neighbour, on stiff land, worn very low, with green-sand earth, applied very thinly, and an equal quantity of drawn wood ashes, on adjoining ground. The next crop of clover was pretty good on the green-sand earth, and only a tuft here and there, was large enough to strike the view on the ashed land. The value of drawn ashes as manure, is universally admitted. They are brought in large quantities from Philadelphia, and sold at Salem wharf at eight cents the bushel, and sometimes more.

Lime is used by some farmers about Woodstown, but not generally or extensively. I could not learn that its being beneficial or useless, had any connexion with the fact that the green-sand earth had been previously applied, or not. Particular opinions were opposed on this point.

Most persons thought that the green-sand earth, in very dry seasons, burnt and injured the crop. S. Lippincott thought that on this account he had once made not more than five bushels of corn to the acre, on ground that would otherwise have made 75 bushels, from its previous high improvement by the use of this earth. Others thought that it was only on gravelly and sandy soils (such as Lippincott's field was) that any such injury was produced.

As to the soils to which this manuring earth is suitable, all persons of whom I heard in Salem, agreed in the belief that it acted well on all soils fit for tillage, or grass land dry enough to make good meadow or pasture. On loams, and on the more clayey soils, (which two classes comprise nearly all the surface of Salem county,) the effect is best. It is supposed to be much less on the sandy lands. But the farmers about Woodstown, do not agree in the opinion of those whom I conversed with in Gloucester, that the best green-sand earth is inert, or nearly so, on very sandy soils. Josiah Tatum had stated to me the same, as the opinion just before expressed to him, by Edward Harris, an intelligent gentleman of Burlington county, whose judgment and experience J. Tatum said were entitled to great respect. Mr. Harris dissented from this opinion of the Gloucester farmers, and thought that if they had fully and fairly tried this manure on their sandy lands, they would have thought differently.

The lands of Pittsgrove township were mentioned to me, by several different persons, as furnishing the most uniform and extensive case of great improvement, in Salem county. The soil is of different grades of loam, and generally of medium texture. The surface is generally undulating. The original quality, or degree of natural fertility, seemed to have been good, though not by any means rich. These also seem to have been the circumstances generally of all the lands I saw in this county, except those near to the town of Salem, which are quite level and very rich, now as well as naturally. The largest landed property of D. M. Davis, lies in Pittsgrove township, and may serve as a sample of the former general condition, and the more recent changes. I will, therefore, state what I learned of this particular property. Twenty years ago, and for some years after, this land rented for $100 a year; and after considerable improvement, and as late as seven years ago, the rent was only $300. There were formerly, about 200 acres of arable land, regularly cultivated in turn, and reduced to the lowest state of exhaustion. Since, 125 acres more have been brought into cultivation, and 20 acres more added to the farm by purchase, at $5 the acre—which here is held to be as low a price, and indicating as worthless land, as $1 the acre would in lower Virginia. Mr. Davis's occupancy and the improvement by green-sand earth, began ten years ago, and for the last seven years the land has been in the hands of two tenants, on leases of five years. The tenants were bound by contract, to apply a certain amount of green-sand; but the obligation was superfluous, as they apply much more than their obligation requires. The tenant of the larger of the two farms, was bound to apply 500 loads during his first lease. Before two years had passed he had applied 1000 loads, expecting to be amply repaid in the three next years of his occupancy. The supply is from Woodstown, and the distance five miles. The annual rent now paid on the two farms of about 345 acres, is $1,125, and the value of the land annually increasing. The proprietor furnishes rails, or materials for fencing. But the tenants are not even supplied with fuel from the land, but purchase it elsewhere. I walked through these farms, and the appearance of the crops, and especially of the clover and pasture lands, and of the heavy bullocks fatted by grazing thereupon, for market, served as abundant confirmation of all that was told me of the productiveness.

In company with Mr. Davis, and upon his suggestion, I visited still another and more remarkable scene of agricultural improvement. He had told me that there were to be seen on the land occupied by Mr. William Reeve, some of the best evidences of good farming and successful improvements by, or in connexion with, the use of green-sand earth. This farm lies adjoining the village of Allowaystown, and consists now of 200 acres of farming land, or the entire extent of fields for tillage and grass. The surface is more undulating than usual, but not too uneven or hilly. The soil of the farm (as of its neighbourhood generally,) is stiffer than any other part of the county before seen, being a pale yellow clay, which is stiff enough to be difficult to till, and to form cracks in the surface in dry weather. By the way, it may not be amiss to mention that I saw no sign of red clay soil or subsoil, on my whole route in New Jersey. The present growth of the farm, which is mostly clover, shows everywhere within the general enclosure, high productiveness and beautiful farming condition. Yet a part without the enclosure, seemed to be a specimen of as barren and worthless land as I ever saw, that was capable of producing any vegetation. It had formerly been cultivated and worn out, and had long been left out of tillage. It had a few scattering bushes, and a general, but thin and low growth of broom sedge. Cinque-foil and mouse-ear were also plenty, all these plants being deemed the strongest evidences of barren land. Some spots could not even bear either of these—but its otherwise bare surface was covered with a thin and hard grey crust, which seems to have no life, but which in fact is a kind of moss, indicative of next to absolute sterility. These several marks reached generally to the very fence, and when on the other side, and but a few inches distant, clover and other growths of fertile ground showed clearly that the hand of the farmer, and that but recently, had caused this striking difference of condition. Thirty acres here had been bought for $4.50 the acre. Such as is this outer and waste land, Mr. Reeve assured me was the condition of much the greater part of the farm ten years ago, when the estate was purchased and the improvement of the land was first begun. Some of it indeed, was much worse. For all the steeper declivities, such as were pointed out to me, then green with thickly set clover and other grasses, were formerly naked galls.

The first year of their farming, 1833, the whole land was first under one general enclosure, and all the grass was mowed that could be possibly obtained, as hay was the most important object. The whole product was five tons only. In reply to some of the jocular taunts and predictions of their neighbours, Mr. Reeve stated that he would double the first year's product of hay every year, until the amount reached 100 tons from a single mowing. In seven years, the crop amounted to 225 tons, besides the then keeping a fine stock of grazing cattle, and the regular tillage of grain crops.

The earliest operations of tillage and improving (in 1833,) was to plough 12 acres in the spring, apply stone lime at 50 bushels the acre, and cultivate in corn. The next year oats. Both crops were very good for the land. Again 50 bushels of lime were applied to the acre; and before the wheat, which was the next crop, barn-yard manure was given at the rate of 10 two-horse loads to the acre. Timothy seed sown with the wheat, and clover in the spring. The next winter, after the wheat crop, applied green-sand earth, 10 tons to the acre, hauled seven miles from Woodstown. The crop of hay was two and a half tons to the acre; and its value was enough to pay for the whole expense of all the lime applied, charged at the cost when landed on the wharf, and that of the purchase and wagoning, and spreading of the green-sand earth. This year, a neighbour offered Mr. Reeve $24 for the grass then standing on a single acre, which was refused; and he sold the grass of half an acre for $15, or at the rate of $30 the acre.

Mr. Reeve knows of no land where the green-sand earth has been applied and found useless.

Among the many reports I had heard in advance, were conflicting statements of the effects of this earth on the naturally rich and very productive lands around the town of Salem. While some affirmed the benefit, others stated that the use of green-sand earth had been there discontinued. I had but little time left for inquiry on this head; but that little was enough to show that both reports were true. Enough applications of this earth had been made on these good lands, to show very good effects; but the distance to the nearest diggings was so great, and the supply of water-borne lime and drawn ashes so much cheaper and more convenient, that the use of the latter manures had nearly or entirely superseded the former.

I have aimed throughout this inquiry, to obtain and present the opinions of others, rather than to give my own views most prominency. And when the most experienced and well informed practical improvers differ so much on this subject, it could not be expected that my hasty digest of their opinions should be entirely free from contradictions. In truth, my own opinions have not remained the same, at different scenes of this hasty examination, nor even during the writing of both the earlier and the latter part of this account. While I have learned much as to the effects and value of this manuring earth, by my inquiries and personal examination, I have at the same time also learned that I was before, and still am, profoundly ignorant of the cause and manner of the action. I will not even presume to attempt any explanation of what appears to me so far inexplicable by any of the views yet set forth.

There seem to be important differences of action between the green-sand of New Jersey and that of James river. It is true that the latter has been usually applied by myself in very small doses, say 20 to 40 bushels the acre, while in New Jersey the quantity is usually 200 bushels, and often much more. But even this great difference of quantity does not at all serve to explain the differences of results—nor do the manifest differences of the different earths, or of the soils of the different regions. So far as my practical experience has extended, the green-sand earth of James river acts precisely as does gypsum, though more strongly—is limited to the same soils, to the same crops, and like gypsum, has but a temporary though more extended limit of time of action. But the green-sand earth of New Jersey, while agreeing greatly with that of James river in its visible effects, especially on clover, seems to act on nearly all soils, on most crops, and is counted as a very long enduring, if not indeed a permanent fertilizer.

All the best green-sand earths which I saw, contain no carbonate of lime, or at most and in very few cases, so small a proportion as to be of no appreciable effect. They contain—according to Professor H. D. Rogers' statements of their contents—from 85 to 95 parts of green-sand in the 100 of earth; and the pure green-sand, or silicate of iron and pot-ash, contains from 5 to 14 per cent., or generally 9 or 10 per cent. of pot-ash. Since the discovery of this latter ingredient was made by Henry Seybert, Esq,, of Philadelphia, it has been generally supposed to be the main if not the sole fertilizing ingredient. I deem that opinion extremely questionable; and, as to the green-sand earth of James river, altogether untenable. But I will not here repeat the grounds of this opinion.

The gypsum, which is certainly present in most if not all the green-sand earth of New Jersey, has not been considered by the highest authorities, as being an important ingredient. Indeed it does not appear among the contents in the many analyses stated in Professor H. D. Rogers' Report. Without claiming for it any very important agency, still it seems to me that the gypsum cannot be of so little amount or effect, as has thus been assumed. And sulphate of iron (copperas) and sulphate of alumine, (alum) which are present in some cases, need only to meet lime in the soil, or to have lime previously mixed with the green-sand earth, to form still more gypsum, by the decomposition and destruction of either or both these salts, which are poisonous to soil and to vegetation.

For the Farmers' Cabinet.

Gravel in Swine.--The Lard Lamp.

Messrs. Editors,—Your correspondent over the signature Agricola, page 216, vol. 6, of Cabinet, will be interested to find that the disease of which he speaks, namely, gravel in swine, has been noticed by General Mansfield, of Delaware, who lost, while fatting the last year, three hogs by that malady. These were all males or barrows, and a portion of the concreted substance found in the urethra, has been preserved by him for examination and exhibition.

With me there is not the slightest doubt, that the worm in the kidney is identical with the gravel in hogs; should this be satisfactorily ascertained, it is presumed that the disease might be removed, or at least the symptoms alleviated, by the same means that are adopted for the relief of the human species, in this exceedingly distressing complaint, of which few, comparatively, die, although it is known that the disorder is very prevalent; while it is worthy observation, few hogs, when decidedly affected in this way, ever recover.

When the General related this circumstance, he added; "One of these hogs I rendered, for the purpose of making cart grease; *now*, in such a case, I should render them all, and burn them in lard lamps,"—a mode of management which will be found of immense importance to the agriculturist; every one having been made sensible of the liability he is under of losing animals by disease while fatting. And this leads me to mention with commendation, the lard lamp invented and patented by E. S. Archer, 32 N. Second st., Philadelphia, having had one of them in constant use for a month past, which has given much satisfaction; observing, that by this lamp, lard, after it has become rancid, or discoloured by fire, whilst rendering, can be burnt without smoke or disagreeable smell. The mode of conducting heat to the bottom of the lard by a copper tube, closed on the top and reaching to the flame of the lamp, by which the heat is prevented from escape until it has passed through the body of the lard, causing a constant ebullition upwards and through it, is very ingenious; forming a sort of argand burner. The stream of rarefied air forced through the copper tube to the bottom of the lard, passing through it and escaping by the wick, causes the smoke to be consumed in its passage through the flame; and the wick might be elevated so as to give a great volume of flame, without causing the least unpleasant smell or smoke whatever. I consider, therefore, the introduction of the lard lamp into the establishment of the farmer, an epoch in the economy of his household, of great importance to his future prosperity. D.

Cantwell's bridge, November 24th, 1842.

From the Western Farmer and Gardener.

Caution to Millers and Consumers of Bread.

Mobile, July 17th, 1842.

To Dr. M. W. Philips,—About a month ago, a number of negroes on the plantation of James G. Lyon, near Mobile, were seized with violent pains and cramp in the stomach, fainting fits, irritability of stomach, obstinate constipation, some with convulsions and palsy of the limbs, little or no fever, &c.; in short, all the symptoms which belong to what has been called Lead, or Painter's colic.

In a short time nearly every negro on the place was seized with similar symptoms, and it became evident that there must be some extraordinary cause at work. On investigation, *the corn meal which they had been eating, was found to contain lead which had been ground up with it*,—half a pint of lead was picked out of a bushel and a half of meal.

On going to the mill and examining the stones, it was found that the miller had, for the purpose of balancing and fixing it, *poured several pounds of melted lead into the eye of the runner stone, and this had worked loose, got between the stones, and was ground up with the meal!* The whole mystery was solved at once.

Now sir, I am informed that it is a very common thing for millers to use lead in this way, and I have no doubt that very many persons have been poisoned without ever being able to account for it, and the symptoms have been looked upon and treated as bilious colic, or some other disease.

I have just met with a similar fact, recorded in one of my foreign journals—a whole family had symptoms like those I have enumerated above, and on analysis, the flour they had been eating was found to contain lead.

Mr. Lyon has already lost four valuable hands, and a considerable number of others are almost entirely helpless from palsy in their limbs, some of whom will either die or remain useless for life.

When I say to you that every man, woman and child, is in daily danger of being poisoned by such ignorance or negligence, I have, I hope, said enough to impress upon your readers the importance of inquiring closely into this matter. Yours, &c., J. C. Nott, M. D.

A Table of Imports, &c., &c.

The annexed table, showing the value of imports and exports annually, from 1821 to 1841, inclusive—the receipts into the treasury annually, from customs, during the same period, and the value of bullion and specie imported and exported, was recently communicated to Congress, having been prepared by the Register of the Treasury, in compliance with a resolution of the House.

YEAR.	VALUE OF IMPORTS.			VALUE OF EXPORTS.			RECEIPTS INTO THE TREASURY.	BULLION&SPECIE	
	FREE OF DUTY.	PAYING DUTY.	TOTAL.	FOREIGN MERCH'DIZE.	DOMESTIC PRODUCE &C.	TOTAL.		IMPORTED.	EXPORTED.
1821	$10,082,313	$52,503,411	$ 62,585,724	$21,302,488	$ 43,671,394	$ 64,974,382	$13,004,447	$ 8,064,890	$10,478,059
1822	7,298,708	75,942,833	83,241,541	22,2 6,202	49,874,079	72,160,281	17,589,762	3,396,846	10,810,180
1823	9,048,288	68,530,979	77,579,267	27,5 3,622	47,155,408	74,699,030	19,088,433	5,097,896	6,372,987
1824	12,563,773	67,935,234	80,549,007	25,337,157	53,649,500	75,986,657	17,878,326	8,379,835	7,014,552
1825	10,947,510	85,392,565	96,340,075	12,590,643	66,944,745	99,575,388	20,098,713	6,150,765	8,470,534
1826	12,567,769	72,408,708	84,974,477	24,539,612	53,055,710	77,595,322	23,344,332	6,880,956	4,704,236
1827	11,855,104	67,628,964	79,484,068	23,404,136	58,921,691	82,324,827	19,712,283	8,151,130	8,014,880
1828	12,379,176	76,130,648	88,507,824	21,595,017	50,669,669	72,264,686	23,205,524	7,489,741	8,213,476
1829	11,805,501	62,687,026	74,492,527	16,658,478	55,700,193	72,358,671	22,681,966	7,403,612	4,924,020
1830	12,746,245	58,130,675	70,876,920	14,387,479	59,462,029	73,349,508	21,922,391	8,155,964	2,178,773
1831	13,456,625	89,734,499	103,191,124	28,033,526	64,277,057	81,310,583	24,224,442	7,305,945	9,014,931
1832	14,217,453	86,779,813	101,029,266	24,039,473	63,137,470	87,176,943	28,465,237	5,907,504	5,656,340
1833	32,447,950	75,670,361	108,118,311	19,822,735	70,317,698	90,140,433	29,032,509	7,070,368	2,611,701
1834	68,393,180	58,129,152	126,521,332	23,312,811	81,024,162	104,336,973	16,214,957	17,911,632	2,076,758
1835	77,940,493	71,955,249	149,895,742	20,504,495	101,189,082	121,693,577	19,391,311	13,131,447	6,477,775
1836	92,056,481	97,923,554	189,980,035	21,746,360	106,916,680	128,663,040	23,400,941	13,400,801	4,324,336
1837	69,250,031	71,739,186	140,989,217	21,854,962	95,564,414	117,419,376	11,169,290	10,516,414	5,976,249
1838	60,860,005	52,857,399	113,717,401	12,452,795	96,033,821	108,486,616	16,058,800	17,747,116	3,508,046
1839	76,401,792	85,690,340	162,092,132	17,494,525	103,533,891	121,028,416	23,137,925	5,595,176	8,776,743
1840	57,196,204	49,945,315	107,141,519	18,190,312	113,895,634	131,571,950	13,499,502	8,882,813	8,417,014
1841	65,019,731	61,925,757	127,945,488	15,469,081	106,382,722	121,854,803	14,481,216	4,975,883	10,034,332

ESTIMATE.

It has been estimated by some that there was of specie and bullion in the country on the 30th of September, 1820, $18,000,000; but say	$20,000,000
Imported from 1821 to 1841, in 20 years.	181,589,841
	201,589,841
Deduct exported from 1821 to 1841	138,085,922
Balance	$63,503,919

Philadelphia Ledger.

Promptness.—Promptness in mechanics is of the highest importance. The farmer who sows or reaps out of season, will not lose more by doing things out of the proper time, than will the mechanic in a long run, by neglecting to perform work and fulfil orders as promised.

The farmer sees plainly by the operations of nature around him, the importance of promptness and despatch. If he is late in sowing, he finds that the season of genial rains and sunshine is passing away without preparation on his part to profit by them, and the green fields of his neighbour are an evidence of his loss, and spurs him on to action.

But the mechanic has less evidence of his loss by neglect. The customer that is often disappointed, may bear the evil silently, but resolve to learn by experience and look for one more prompt for the future.

Disappointments in mechanical work are serious evils; and a great many excellent workmen, who have but little to do, are among the first in their profession in skill, and could do a large business, were they as much noted for their promptness as for their skill and ingenuity.—*Farmers' Journal.*

Straw Manufacture.—The whole value of the straw manufacture in the state of Massachusetts, is ascertained to exceed two millions of dollars a year, and it gives partial employment to more than one hundred thousand persons. Few people are aware of the importance of this apparently insignificant branch of industry. It has grown up under the protective system, from small beginnings, and has prevented the necessity of exporting from this country to France and Italy, sixteen hundred thousand dollars per annum, in specie, to purchase straws, twenty per cent. less than we now have them. The county of Norfolk, Mass., exports straw manufactures to the annual value of six hundred thousand dollars; and the town of Franklin, with a population of about fourteen hundred, has produced one hundred and twenty thousand dollars a year. The labour is performed mostly by females and children, labour which would be wholly useless and unproductive. How important that this productive branch of industry should be preserved, and not struck out of existence to subserve the object of idle politicians.—*Maine Cultivator.*

For the Farmers' Cabinet.

The Cob and Corn Crusher.

At the late meeting of the Philadelphia Agricultural Society, there was exhibited a machine for crushing or grinding the cob with the corn for cattle provender; a most valuable improvement, and well deserving the favourable notice of every one engaged in the pursuits of husbandry. It has by some been questioned, whether the cob alone contains sufficient nutriment to render it worth the labour and expense of grinding; but with me there is no doubt about it, and it is only a matter of surprise that every one should not long ago have been convinced of the fact by experiment, which might easily be made by boiling crushed cobs in water for some hours, when, on straining off the water and setting it to cool, it will be found to form a jelly.

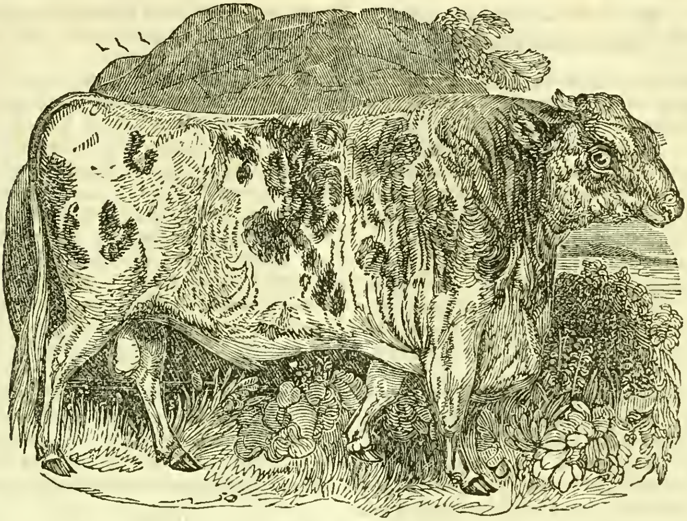
At the above mentioned meeting, I had the pleasure of conversing with the intelligent inventor of the machine, Mr. Byerly: he is a tanner, and the cob-crusher is made after the plan of his bark-mill. On inquiry relating to the quantity of nutriment contained in the corn cob, he informed me, that near his bark-mill was a heap of cobs that had been thrown out as useless, when a poor woman of the neighbourhood, whose only cow was almost the only means she had of supporting her family, came to ask for some cobs, and that he would pass them through the bark-mill as food for the cow; this he did, and his petitioner came regularly after, during the winter, to get her supply of crushed cobs. At the end of the season, he went to see the cow, and found her in the finest condition, her owner assuring him that she had been fed entirely on the crushed cobs, boiled in her iron pot, by which she had been enabled to support almost entirely, herself and children, by the sale of the finest milk and butter ever seen!

In an essay on Indian corn, by P. A. Browne, Esq., see p. 187 2nd vol. of Cabinet, it is said, "The cob may be ground to fatten cattle, and an oil may be extracted from it." It is also said, "Peter Miner, of Albemarle co., Virginia, made the following experiment; he had ten bushels of meal of the corn and cob ground together, weighing 367 lbs., and ten bushels of *pure corn meal* subjected to the process of distillation, and the result was, 18 gallons of spirit from the latter, and 13 gallons from the former. Now, if the corn cobs had been destitute of all value, the product of the former, estimating the quantity of pure corn meal at five bushels; which is the general rule, to allow one half in bulk to the cob, ought to have been nine gallons only; but thirteen gallons having been obtained, four of them must have been extracted from the cob." It is worthy of a passing remark, it is added in a note at the bottom of the page; "If they wish to cultivate Indian corn for fodder alone, or *for making sugar*, they can deprive it of the power of going to ear, and make it throw all the juices into the stalks and leaves."

I have witnessed many instances of the advantages resulting from grinding the cob with the corn, and have never known a person who had tried it, dissatisfied with the result; it is they only, who know nothing about it who object to it: at any rate the ground cob must be as good as bran, and an addition of one or two thousand bushels of bran to the means of feeding stock during the winter, would not be thought lightly of by any, one would suppose. It has been remarked, the cob is peculiarly adapted and conveniently situated for grinding and mixing with the corn; asimilating with it, and forming a meal peculiarly congenial to the health of animals; giving just the due proportion of coarse food to mix with the fine; a necessary consideration in the feeding of stock; and withal so cheaply supplied, that one is at a loss to conceive how the thing has so long been neglected. The objection to grinding the cob with the corn while it is new, could be obviated, by kiln-drying the ears the fore part of the season; but this would not be requisite more than a couple of months or so, after harvest, as by that time the ears will be sufficiently dry, so as to allow them to be ground, without danger that the meal would ferment in the binn. I remember a correspondent in a former number of the Cabinet observes, that Mr. Alexander Cooper of Jersey, has long been in the custom of grinding the cob with the corn, and that his stock is remarkable for health and condition; and from late inquiry, I find that he still continues the practice with perfect satisfaction. While on a late visit to one of the same family at Camden the last week, I observed the same mode of feeding carried out to a considerable extent, and with complete success; the meal having been ground so fine, that no one without close examination would have the idea, that it was aught but meal from clean corn. It is a great loss to the country that every mill is not fitted for the purpose of grinding the cob with the corn when desirable,—would our millers think seriously about it. R. Denham.

Berks co., Nov. 18, 1842.

Make the hogs a warm nest. *Comfort* is cheap food for all domestic animals.



THE SUFFOLK BULL.

The above is an excellent portrait of the real Suffolk bull. Some of these animals are handsome, but the wonder is, that ere now all claims to good figure have not departed from the race, for the bulls are rarely suffered to live after they are three years old, however excellent they may be; for the breeder believes that if they are kept longer, they do not get stock equally good, and particularly, that their calves are not so large after that period. But nothing can be more erroneous or mischievous, for a bull is never in better condition than from four to seven years old. And in another point of view the practice is subject to radical objection, for before the value of the progeny of a bull can be known, he is slaughtered; so that if the cows by him turn out to be the most excellent milkers, no advantage can be derived from the discovery, the sire of the stock having passed away. And to such an extent was this absurd practice formerly carried, that having obtained, either by accident or exertions a good breed of milkers, the people have preserved them by the merest chance, and without any of the care and attention which their value demanded. And somewhat of the same system is pursued with regard to the heifers,—a heifer under two years old with a calf at her foot, being no rare object. This system of breeding before the form of either the sire or dam is developed; this tax upon the powers of nature to contribute to the growth of the young mother as well as to that of the calf, must be exceedingly injurious. She, also, at four years old often being discarded and fattened for the butcher, unless she has displayed uncommon milking properties; but even when so discarded, poor and angular as she may be, she fattens with a rapidity far greater than could be expected from her gaunt appearance. Whence she obtained the faculty of yielding so much milk, is a question which no one has yet been able to solve, for her progenitor, the Galloway, has it not, and the Holderness could scarcely be concerned, for more than a century ago the "Suffolk dun" was as celebrated a milker as she is at present, and the Holderness had not at that time been introduced; while the fattening property of the Galloway has not yet been impaired. The *grazing* property of the Suffolk has been supposed to be increased by a cross with the short-horn, but their value as milkers has been uniformly diminished by the admixture; while the progeny, although better than the Suffolk for grazing, is still inferior to the pure short-horn. Few of the real Suffolks are, however, reared for grazing; their value in this respect being decidedly inferior to the pure Galloways.

Another cause of the deterioration of the breed, exists in the practice every where observed, of slaughtering the early calves; for although the calves for rearing are selected according to the milking properties of the dams, few of the early-dropped ones, which are generally the best and strongest, are saved; the high price of veal offering a temptation which few can resist. The selection is, therefore, almost entirely from amongst the latter calves, which have not so good a chance as the early dropped would have had, of becoming strong and hardy before winter, and thus acquiring a good constitution and the certainty of thriving and yielding well.

For the Farmers' Cabinet

Magnesian Lime.

"Errors of opinion in Agriculture, as in politics, are safely tolerated, while science or truth is left free to combat them."

Having recently had a conversation with a very intelligent farmer, from another part of this county, the following dialogue ensued.

A. Do you take as much delight in agricultural reading as formerly?

B. Certainly. In addition to all the approved works on Agricultural Chemistry and Geology, Physiology, &c. in my possession, I am also a subscriber to the various standard Agricultural periodicals of this country and Europe.

A. I am pleased to hear it. But have you been enabled to make any advantageous application of your book knowledge?

B. It is a source of much gratification to me, to understand the *why* and *because* of various matters, involving science in our worthy business.

A. Have you received the last number of the Farmers' Cabinet? if so, what say your neighbours of the communication on the subject of magnesian lime, by B. Webb?

B. I have heard various opinions; some recommend a rejoinder, while others say, we have a discerning public, who will pass the article for its worth. The assertion, that he has satisfied himself, from observation and experiments, that *much larger* crops of wheat can be raised in Delaware and Maryland, than in Lancaster and Chester counties, where magnesian lime is applied, is, to say the least, gratuitous; but probably he takes the two States as a *whole* against the two counties. He is deploring the diminution in the product of grain in South-eastern Pennsylvania, owing to the use of magnesian lime, in one paragraph, and in a following one, says, in the same district, wonders have been produced by lime in *spite* of magnesia. Now this would be more excusable, if he had not added, that horses, hogs, &c. are destroyed by *hundreds*, merely by feeding on the grain and grass growing where magnesian lime is applied! On this subject, I agree with the prevailing opinion among the intelligent, and echo the approved theory of many eminent Chemists and Geologists, as quoted in former numbers of the Cabinet.

We may review this notion about the destruction of farm-stock, and can we imagine any thing more preposterous? Magnesia of itself being a mild aperient or cathartic, as a medicine, of which two or three pounds, given to a horse, or cow, at a dose, could do no serious injury, and perhaps under particular circumstances, much good; yet it is made to appear, that the small portion taken from the soil, by grain and grass, will kill animals!

B. Webb has much to say about the *pure* lime which he has applied; now the truth is, lime is *never found pure*, but always in a state of combination. He reasons from analogy, that as sheep eat laurel, so plants take up magnesia with the same poisonous results; but the merest *tyro* knows, or ought to know, that magnesia is one of the primitive earths, which form all soils, as well as the crust of the globe! Magnesia is a constituent of *all* the plants the farmer *cultivates*, as well as a constituent of *all* his grain. The celebrated work on Agricultural Chemistry and Geology, which has just gone through the press, by James F. W. Johnston, M. A. F. R. S., Honorary member of the English Agricultural Society, &c. &c.; to quote from page 58 of this work, 100 lbs. of the ash of Wheat, Barley and Oats contain respectively,

	Wheat.	Barley.	Oats.
Lime,	8 lbs.	4⅓ lbs.	3 lbs.
Magnesia,	8 lbs.	8 lbs.	2½ lbs.

So that in the grain of wheat, lime and magnesia are equal; while in the analysis of barley, we have 3½ per cent. more of *magnesia* than lime. On the subject of diminution in the wheat crops in our neighbourhood, farms of 200 acres before magnesian limeing commenced, have since been subdivided into three farms; of which *each* is now made to produce as much wheat as the whole did, before the subdivision; and before magnesian limeing commenced on the poor lands, in the southwest of Chester county, many there bought their wheat for bread! Now, you have no idea of the amount of their surplus. Another consequence is, our best limed farms *now* sell for $120 per acre, at the risk of magnesia, these hard times.

A Lancaster County Farmer.

November 20th, 1842.

A Chicken Yard.

We have often thought that farmers would find it to their interest, were they to enclose a yard, of suitable dimensions, with a high fence, for the accommodation of their chickens. As managed at present, left as they are to range at will about the barn and stables, and lay their eggs and set where they list, a very large proportion of their eggs are lost to their *owners* in the first place; *secondly*, fewer chickens are hatched out; *thirdly*, from having free access to the dung heaps, the young broods as well as the old hens, often contract diseases, which they would escape were they kept in a proper yard, besides being less liable to be preyed upon by weasels, minks, rats and other enemies.

In this yard, we would have two divisions: in one we would keep the roosters and laying and setting hens. In the other, the hens with chickens. Into this latter yard, we would remove the hens and their young ones as they might be hatched out. The hens to be confined in coops so made as to protect them and their broods from the rain. In addition to these coops, the hens with chickens should be provided with an open shed, facing the south, in which they might be placed during long continued rains. Fresh water to be supplied in shallow troughs, twice a day, to the inmates of both departments of the yard. In each we would have a cart load of good sand, in which the fowls might dust themselves whenever they pleased. Besides this, we would have, in each yard, a small heap of ashes, as a preventive of *vermin*, and a small quantity of lime to assist in digestion and the formation of the shells of the eggs. The house in the yard allotted to the laying and setting hens should be tight, but airy and sufficiently capacious to hold the fowls with comfort. Good roosts should be provided. In the formation of the *nests*, we would have them so constructed as to *draw out*, to facilitate the operation of cleaning. Always before setting a hen we would have the drawer taken out, well cleaned, and white washed inside, which operation should be repeated as each hen hatched out her brood. The nests should be often renewed with clean hay or straw, and always before setting a hen. The old chickens should be regularly fed, *twice* a day in summer, and *three* times in winter—the young ones at least four times.

If it be objected against this plan, that it would take more to feed them than in the present one, we answer—it is not so. At present, the chickens are, or ought to be, *regularly* fed, the old ones once or twice a day, the young ones oftener. Besides this, they all have access to your stack yards, barn and stables, where they glut their appetites as often as they please. In our plan of feeding, you would know what they really did consume as well as its cost; as it is, you are completely in the dark upon these subjects. Again, it is known, that chickens, which have access to cattle in winter, are apt to generate lice on them, and that cattle thus annoyed, do not thrive well. By our plan, this inconvenience and nuisance would be avoided.

If it be objected, that the ground appropriated to the chicken yard would be lost to culture, we meet the objection by the denial of its truth, and for the following reasons.—For fifty hens, and the requisite number of roosters, an acre of ground would be sufficient, and certainly no one will tell us, that this number of fowls, with the range of the barn, stable, and adjacent fields, would not destroy, independent of their regular feed, more than the product of one acre of ground. But by our plan the ground would not be lost to culture at all; for we propose to plant in the chicken yard, say from forty to fifty *Apricot*, *Plum* and *Damson* trees, or a like number of other choice fruit trees, whose product would pay for the rent of the ground, ten times told. Placed in such a situation, we believe the trees named would hold and ripen their fruit, because from the natural insectiferous propensities of the chicken, but few of those insects, which prey upon the Apricot and Plum, would escape their watchful eyes and all-devouring beaks.

We think we have made out a case of economy in favour of our plan, and shall leave it to our readers to adopt it or not as to them may seem most meet and proper.

A few words more and we are done. The hen house, and shed should be cleaned out and white-washed every Spring, Summer and Fall.—*Amer. Farmer.*

Choked Cattle.—A friend from Wrentham informs us that he succeeds, with great ease in relieving choked cattle in the following manner:

Raise the animal's head, with a rope or chain attached to some convenient beam. Procure an old cart-wheel box, through which a man may thrust his arm. With the aid of one on each side, place this box in the animal's mouth and keep it steady. Then run the hand through it into the throat, putting the fingers carefully beyond the potatoe or apple in the way. Draw it out slowly and carefully and relief is experienced immediately. Our informant has tried it repeatedly, and thinks every farmer ought to have a cart-wheel box or something of the kind always ready.—*Mass. Ploughman.*

Last Monday we picked seven barrels full of charming Baldwin apples, from a young tree that was taken from the nursery fifteen years ago. This tree has borne more or less for these ten years past: it stands near the barn and extends its roots far in that direction. On digging up some loam under the barn, we found apple tree roots in great plenty *three* rods from the trunk of the tree. This tree is as large as four others that were set at the same time, but they had not equal advantages. The roots of trees extend much farther than most people imagine; and digging up the soil three or four feet each way from the body gives but a partial relief to the roots.—*Ibid.*

For the Farmers' Cabinet.

Fall-ploughing and Subsoiling.

In a late journey through Chester and Lancaster counties, I remarked numerous instances of fall-ploughing, and cannot but attribute much of that first and most important step in improvement, to the many excellent papers on that subject which have appeared from time to time in the pages of the Cabinet. Some of the practitioners have added another *step*, and have spread their lime on these winter-fallows,—a most essential one in the routine, and which it only remains to follow up by a *third*,—I mean *autumnal subsoiling*, when the system might be pronounced perfect. By this additional labour, the only objection that I have ever yet heard to fall-ploughing, is completely done away, and all difficulties are obviated; as there will then be no fear of the washing away of the fresh-turned soil during the rains and frosts of winter, as these will find their way into the loosened subsoil and fertilize it to an astonishing degree, by the time the spring season of working has arrived; not a particle of loss accruing, but much benefit to the next year's crop. Not that there ever has been, in my estimation, the least suspicion that any absolute loss would accrue in this way from fall-ploughing, even although the process of subsoiling should be omitted; but then it would be necessary to cut diagonal lines or furrows across those lands which lie on a declivity, to conduct the surface-water and prevent the washing of the ploughed land into gullies, taking especial care that these diagonal furrows be carried at so small an angle of descent as merely to take the water away on an easy run; else, they will be found to increase the danger they were intended to obviate, and form those gullies which they were made to prevent. With this care and attention, the benefit of fall-ploughing will be found an unmixed source of pleasure and profit; pleasurable, because expediting the labours of the spring, and enabling the occupier of the soil to enter earlier on his labours at that busy season; profitable, by enabling his land to withstand a drought without flinching, as well as be the means of relieving his soil during a wet and unkindly season; all which is effected, by laying up the land by a deep furrow early in the autumn to the influence of a winter's frost and snow. These advantages I have often urged upon the notice of my agricultural friends, aided by the pages of the Cabinet, the *last number* of which is generally my travelling companion; pointing out to them at the same time, the perfect indifference they exhibit on the score of *washing* of the soil, when they sow their crops of wheat in the autumn, although the land has been repeatedly ploughed and pulverized, and made light by manuring after oats, by which the soil is rendered so porous as to be in the greatest danger of washing to a ruinous extent: but the universality of the practice has rendered it familiar, and not a thought about the injury they are liable to sustain ever enters their imaginations; nor is there in fact any cause for fear; the certain good arising from the practice, overbalancing the imaginary evil a hundred fold.

But let it be remembered, that the earlier fall-ploughing is performed, the better, so that the fresh-turned land may derive benefit from exposure to the fertilizing influence of the sun's rays, which would be found of importance equal to a covering of manure; the first drying of the land and the after slaking by means of the rains, rendering the soil so porous as to admit the frosts and snows to shake and pulverize it the whole depth to which it had been turned, and preventing the evil so greatly feared, namely, a washing away of the surface. In my opinion, there is no improvement in agriculture at all comparable to a rigid observance of fall-ploughing, when it is carefully and seasonably performed, and accompanied by a coat of lime as a top dressing, so to lie during the winter, whether the land be designed for oats, to be harrowed in early in the spring without a second ploughing; or for corn, peas, potatoes, barley, or any other crop; convinced as I am, that such an expenditure of the lime is the proper mode of application; after which, the land might be manured, without fear that the ripening of the crop will be delayed, so as to be liable to the rust,—a common occurrence, if lime be added to the manure on fallowed land in the autumn, preparatory to the sowing of wheat; for it is the nature of lime, by its antiseptic properties, to retard the action of the dung, so as to cause it to be giving out its energies long after the time has arrived for vegetation to cease, and the ripening process to follow,—the only satisfactory mode with which I am acquainted, of accounting for the fact, that lime operates injuriously on wheat, by causing the crop to grow and continue green for too long a period.

To those, however, who have not subsoiled their land the present autumn, I would say, do not hesitate to adopt that plan of deepening and improving your soil, in the coming spring. A single trial of that most remarkable instrument, the subsoil plough, will convince any man of reflection, that the process must be beneficial to all parties,—to the soil, to the crops, and the owner of the land; and if persevered in, these benefits will ultimately be of such value, as to stamp the system of subsoiling as one of the greatest improvements of the age. I consider it peculiarly adapted to the counties of Lancaster and Chester, as many of their lands are high and rolling, with hard and gravelly subsoils, over which the common plough is apt to pass, especially in seasons of drought, with but little effect; on these, a pair of horses will be able to work a subsoil plough to great purpose, and with such ease as to astonish those who have never witnessed its operations; much, however, depending upon the nature of the subsoil, and the depth to which the plough is sent. An ox-team is better adapted to the labour than horses; the only objection to them is, they are slower in their pace than horses, and will in a degree retard their working, as one team cannot proceed faster than the other; but this can be obviated by employing oxen for both ploughing and subsoiling; and in many cases the first furrow can be turned by one pair, and the subsoiling be done by another, it not being so necessary to penetrate with the first furrow so deep as would be requisite, were no subsoiling to follow. In the case of balks, too, the subsoil plough following, the evil is remedied effectually, without pulling back.

I find upon inquiry, there are two sizes of the subsoil plough for sale at No. 176 Market Street, Philada., the smallest of which will be found large enough for common purposes, stirring the subsoil to the depth of a foot or more. A third size is, however, being manufactured, suitable for a single horse; but whether the latter will be large enough to answer the purpose of stirring effectually the subsoil, is yet to be seen; its small dimensions would seem to fit it for horticultural purposes, and the lands of small occupiers, where one horse only is kept, but the fear is that such an implement will not be equal to the task, and then discredit might arise to a system from which, if effectually pursued, there would be no question of the most beneficial results; these, however, must not be expected to show their full effects the first season, as much of the richness of the surface-soil will at first be expended in penetrating into and fructifying the subsoil; and if this be removed to a great depth and be very sterile, the process might not be completed the first year. It is to those only who contend manfully, that the promise is made,—"In due time ye shall reap, if ye faint not." Vir.

Nov. 26th, 1842.

When men speak ill of you, live so as nobody will believe them.

For the Farmers' Cabinet.

Small Farms.

Mr. Editor.—Although I am not immediately engaged in agricultural pursuits, yet my avocations frequently call me into the country, where I probably experience as much pleasure while overlooking my friends, as they do in the full enjoyment of their possessions. Perhaps there is not on earth an employment at all comparable to that connected with the tillage of the soil, and the rearing of animals in all their varieties; but there is not on earth a greater difference between the arrangements of a well regulated farm, with means fully adequate to the end, and an estate that is too large and unwieldy for its possessor. And this brings me to the subject on which I have long thought I would trouble you with a few remarks, namely, the relative proportions between the farm and its occupant. The time has been, when a man would measure himself by the number of acres which he owned, without regard to the means he possessed of cultivating them, or rendering them profitable; but I find the feeling is hourly gaining ground, that large possessions are a "wearisomeness to the bones," and like all other cumbrous *machines*, are every instant in danger of falling to pieces by their own weight. Indeed it is strikingly apparent, that the possession of thousands of acres, is no longer considered synonymous with thousands of dollars, on the principle, it is presumed, that the most valuable articles are generally "packed in small parcels," if you will allow the use of a term that savors strongly of the store; and a farm might as easily be too large, as a store may be too "large and long," and expensive.

In a late journey to Pottsville, I made arrangements with a friend who resides in the neighbourhood of Allentown, to accompany him home in his market wagon, where I spent some days in an excess of pleasurable enjoyment; and if I had the power to describe my host, his wife and young family, with his house and land, and the manner in which every thing is arranged and conducted, I think you would feel an interest, second only to my own, as I am not unacquainted with the devotion which you also feel for the delightful occupation. My friend purchased five years ago, with the proceeds of a legacy left him by a relation, 460 acres of land; settled himself upon it and married, with the prospects of long life and prosperity,—so far well; but he soon found that he possessed too much land; and to attempt to cultivate it all, would be to make a toil of a pleasure; instead then, of cultivating a part, and allowing the remainder to lie in a state of nature, until he might require it, during which, it would bring him no return, as "land pays no profit," he wisely determined to sell the greater portion, and lend the purchase money at 6 per cent. interest, to that portion of the land which he should reserve. He therefore disposed of 300 acres for nearly the sum which he paid for the whole; devoted his energies to the 160 acres remaining, which now form a snug farm surrounding his house, of almost unexampled beauty and richness, the capital invested, enabling him to do all that he might wish in the way of improving his land, &c., to the utmost; so that if he be desirous of obtaining improved machinery, an increased quantity of manure or assistance in the way of extra culture, he has the means of procuring it at his finger's end. The consequence is, he feels himself above his work: his labours are performed in season, and his mind, relieved from anxiety, is easy, and his temper pleasant; a state of things plainly discernible amongst the members of his family, within doors and without. His servants are respectful and obliging in their manners, and serve him with *fear*,—but it is with fear to offend. But when I think of his fire-side comforts, I feel more than I can express, for you must know that I am a bachelor of many years' standing, and have never known, in reality, the true meaning of a state, for which the French language has no term by which to express it, namely, *fire-side comfort*. Nor does it appear to me, that a fire-side in town can ever be comparable to one in the country, where so much of the happiness of a family depends on the individuals composing the magic circle,—but this is a tender subject, and I confess my inability to handle it. Suffice it to say, if there be a paradise on earth, my friend has found it; and in the society of as fair and lovely a helpmate as need be wished for the solace of man, may he long live and enjoy it.

The land is divided into eight fields of twenty acres each; the road leading to the house, separating them into four fields on the right, and four fields on the left; and into each of these and over almost the whole, he has a view from his sitting room window, the house standing on an eminence, with trees at the back, but none immediately in front; a verandah, the whole length of the house, forming a shade far preferable to that afforded by trees. These eight fields give the opportunity of adopting a rotation of crops, and a mode of management so simple and easy of accomplishment, that his labours seem to be reduced one half; while the custom which he has adopted, of hiring extra help at hay-time and harvest, as well as on other pressing occasions, leaves him so much leisure, that he has time for observation and reflection and the cultivation of the mind, which enables him to take advantage of the seasons, and to look forward and around with wonderful effect. His grand secret of management, as he terms it, is to be ever carrying some kind of dressing on his fields, to enable him to double his crops, now that he has reduced the number of his acres: to this end, he is always on the alert to turn every thing into manure; the burning of weeds and hassocks, with any rough brush, and the corn-stubs of his twenty acres, affording the means of dressing his compost-heaps with ashes to a very great amount and at trifling cost; while a muck-hole at the extremity of the estate is a never failing mine, from whence, in the shape of hundreds of loads of vegetable deposit, he is coining old gold; every field having its compost-heap in different degrees of preparation, ready to go abroad at the time appointed; having rigidly adopted the plan of never carrying on the fields the manure from the cattle yard, but using it as an ingredient of primary importance in the formation of his compost-heaps, which are repeatedly turned over and thoroughly pulverized before they are spread; lime forming a great proportion, after fermentation in the manure, &c., has nearly past, and a proper degree of decomposition has taken place, but not until then; the lime for this purpose having been slacked long before, and become mild or effete. And these dressings are given to those crops intended for cattle, as well as to corn, (but never to other grain crops,) in the greatest profusion, without fear for the result. Forty acres, or two fields of 20 acres each, are kept in permanent grass, to be brought under culture at the end of 6 or 8 years; a like proportion of the arable portion being laid down the year before these are broken up;—these meadows in the mean time being drest as often and as heavily as possible during their time of rest, by which he is enabled to take two crops of hay, or three cuttings for soiling, every summer. But I must stop, for I have customers coming in, and my dream of happiness must be suspended for the present. Should what I have written be found worthy your acceptance, I may one day resume the subject, for agriculture is indeed "a science that can never cloy." Your subscriber, S. T.

Market Street, Philadelphia, Nov. 9, 1842.

Wounds and bruises on horses.—Take one quarter of a pound of saltpetre, half a pint of vinegar, half a pint of spirits of turpentine; put them together in a bottle, and shake up before using. Apply it to the wound with a feather, three times a day.

The Thames Tunnel.

The Tunnel has now completely reached across the river—a distance of 1,200 feet—and the projector and engineer had the gratification, a short time since, of being the first who walked from bank to bank, to the shaft on the London side. Those shafts on both sides of the river, which are intended for foot passengers, are really grand things. They are a succession of staircases going round a vast circular excavation, between seventy and eighty feet deep, and when they shall be all lighted with gas, will be among the most extraordinary parts of the whole structure. Even now they strongly realize the poetic conception of the descent into the caverns of the Egyptian mysteries; and the view of the interior, nearly a quarter of a mile in extent, lighted with a long succession of melancholy flame, would probably have suggested to a Greek the image of an entrance into Tartarus. But, in our day, the sublime is well exchanged for the practical, and this vast and formidable-looking cavern will be stripped of its poetic associations by the passage of carters and wagons, bales of goods and herds of bullocks. Still it will be almost impossible to divest ourselves of the recollections really attaching to this work. We have before us altogether a new attempt to conquer nature—a great experiment to make rivers passable without boat or bridge; a new and capable contrivance for expediting the intercourse of mankind. The stone bridge is at all times the most expensive edifice in the world, and the bridge of boats is always liable to accidents, and almost certain to be broken up in every instance of a flood. Besides this, the fixed bridge blocks up the navigation of the river for all vessels beyond the size of a barge or a small steamboat. Waterloo bridge cost upwards of a million—London bridge about as much more—Westminster and Blackfriars bridges, which were built at a cheaper rate and in cheaper times, so constantly demand repairs that they probably have cost more than either of the modern ones; but the Tunnel has the advantage of giving a passage from side to side of the Thames, where from the breadth of the river a stone bridge would have probably cost nearer two millions than one, and where no bridge could be thrown across without blocking up the most important part of the Thames, that portion which may be called the great wet dock of London. Yet the expense of the whole has not amounted to more than £400,000; and even this is to be remembered, as an expense greatly increased by the utter novelty of the experiment, by difficulty unforeseen in the commencement, by several irruptions of the river, by the dearness of workmen's wages, arising from the peculiar peril and singular nature of the labour, connected with an undertaking carried on at all hours, and wholly by artificial light. All this, too, in constant hazard of an influx of the river, and the various difficulties belonging to working in a mine. The weight of a vast body of water above, acting alike during summer and winter, which at any moment might break in, and against whose incursions, it was necessary to fortify the outside of the tunnel as the interior, added greatly to the difficulties of the undertaking.

The original object of the tunnel, was, to convey cattle, passengers, and general traffic from the rich counties on the Kent side, to that great mercantile region of the metropolis—the London, and East and West India Docks. How far this will be now effected, is a question which remains to be decided by experience. There can be no doubt that if the traffic be not impeded by the fear of passing under the river, it must be immense. The convenience of escaping the long circuit up to London bridge, which, from the various obstructions in the streets, and the general difficulty of passing through the most crowded portion of the city, must now occupy many hours, would obviously direct the whole current of the traffic into the tunnel. Hitherto, no expedient has been adopted to shorten the passage of the traffic; and the contrivance by which 1,200 clear feet are substituted for at least three miles of the most encumbered thoroughfares imaginable, must be adopted as a matter of palpable advantage. Still there may be difficulties in the way which practice only can exhibit. But any fear of the structure itself we should regard as altogether visionary.—The building of the tunnel seems as solid as a rock. During the whole period from its commencement, we have not heard a single instance of its giving way, vast as the pressure was from above, and trying as were the damps, the ground spring, and the extreme difficulty of building under water. At this moment the roof is obviously as free from damp as the roof of St. Paul's!—and unless an earthquake should burst it, the whole fabric seems much more likely to last than were it exposed to the diversities of temperature, the heats and frosts above ground. The especial advantage of the system of the tunnel is, that it can be adopted in any part of the course of a river, and even in its widest part, (for few European rivers exceed the breadth of the Thames at Rotherhithe, unless where they spread into marshes or lakes,) and yet offer no impediment to the navigation.

Blackwood's Magazine.

For the Farmers' Cabinet.

Wearing Flannel.

Health to the farmer, as to all others, is a consideration of the *first* importance. But we find him more careless on this point than almost any other class, probably because his habits and pursuits, best entitle him, by the immutable laws of nature, to the largest share of its blessings. Active exercise in the open air, frugal regimen, and the absence of many causes of mental disquietude, are all favorable to the maintenance of health. Still there are many errors unwittingly committed, which if corrected upon true physiological principles, would tend to the lessening of human ill. With a view to correct one or two errors which I conceive to exist, I beg leave to suggest a few hints respecting the necessity, and proper mode of wearing flannel.

Flannel, I consider, should be worn at all times; and that wearing it promotes individual comfort. In this latitude, it is probable that to the majority of persons, its use the year round, would be more agreeable than otherwise, if the texture of the material be changed to correspond with the season. Many, however, will prefer discarding it in summer, and this may at any time be done with impunity, by others than invalids.

The idea of flannel rendering its wearer effeminate, has been prejudicial to its free use, and to health. The covering of all animals, except our own species, is adapted to their necessities, sufficient at all times to afford them protection from the ordinary vicissitudes of the weather. That we require clothing all agree; let us therefore imitate nature, by using a sufficiency to gratify our feelings of comfort, and the opposite of effeminacy will be the consequence.

Another false impression exists, of the danger of leaving it off, when it becomes desirable to do so. When the weather is such that the wearer would feel better without it, no fear need be apprehended in relinquishing it at any moment. So far indeed from such being the case, I cannot too strongly recommend the practice of laying it aside at night, and sleeping in a cotton night shirt. The primary object of wearing flannel under clothing, is to preserve the body at a comfortable and uniform temperature. Wool being of light weight and an imperfect conconductor of heat, is the best material to convert into such garments, but at night it is not required for the sake of warmth. An individual in the interior of a close dwelling, is not exposed to the same vicissitudes of cold and heat, as he is when passing abroad, to and fro, during the day, whilst the bed covering that may be at pleasure increased, affords ample protection from too low a temperature; hence flannel is not necessary in bed. But leaving it off for that period, conveys positive advantages. One of the benefits of flannel, is the friction it excites on the skin, determining the blood to the surface and promoting a general circulation of the vital fluids to the extreme parts of the system. Now by wearing it constantly, the cutaneous surface becomes familiarized with its effect, until finally its influence as a counter-irritant is gone. If laid aside, however, for the night, such is not the case, as all can bear witness who are in the habit of doing so. Another argument in favor of the practice, may be derived from its cleanliness. The garment being suspended in the air during the night, becomes ventilated, and in a measure purified, and in warm weather, when moist from the perspirable matter, is dried.

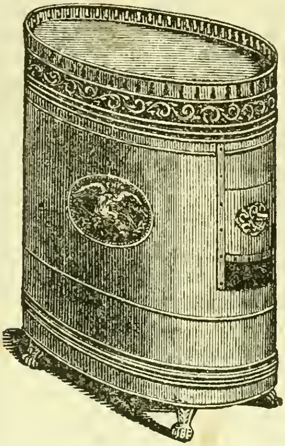
No fear of "catching cold" need be entertained in adopting this plan. The timid may be confidently assured, that those who wear flannel during the day, and during the day only, are much less obnoxious to all diseases of the chest.

Many good and sufficient proofs of the general benefits of woollen next the surface, might be adduced, but they are such as have been frequently presented to the public. My object in this brief essay, has been to draw the attention of my agricultural brethren to one or two points which I regard as of considerable importance, and which though well established among the intelligent of the medical profession, are not so well known as they should be, to the people at large.

Hereafter I may take up other subjects of a kindred nature. Medicus.

Agriculture.—Rev. Mr. Choules in a discourse on Agriculture, says that the first book on culture as a science, was published in England in the sixteenth century. The first reward for an essay on Agriculture, was given by the celebrated "Protector," Oliver Cromwell. But the great era from which all the triumphs of Agriculture now date, is 1793, when under the auspices of Pitt and Sinclair, an Agricultural survey of England was ordered, and public attention directed to this important subject. Peers placed their sons with practical farmers for instruction, Chemistry was soon called to the aid of production, and agriculture took its proper rank as the first and noblest science.

It is said, the wheat crops of France, have been almost doubled within the last thirty years; and the potatoe crop, more than quadrupled within the same period.



For the Farmers' Cabinet.

Orr's Air-tight Stove.

A constant reader of the Cabinet, who has had some experience and much exercise in the way of stove dealing, wishes to know if the editor is ready to endorse the account which appears over his signature at page 174, in vol. VI., highly commendatory of Orr's air-tight stove; or has an additional year added to, or diminished his confidence, in its qualifications there specified? If he still continues to consider it the *chef d'ouvre* in the art of stove-making in this *land of stoves*, he would oblige one who is again afloat, or rather *aground*, seeking for the best stove for chamber or parlour purpose after repeated disappointment, if he would so declare. Any thing relating to this inquiry, in the way of explanation, recommendation or even condemnation, would oblige many readers of the Cabinet, amongst whom a stove, found to embrace the qualifications described as above, would be a great desideratum, particularly in the facility with which a fire may be kept in the bettermost room of an evening, to enable the owner to give a casual visiter a *warm* reception, and as quickly to extinguish it, when no longer requisite. The writer has at present three wood stoves in operation, which together, keep one man pretty busy in sawing and splitting wood for their supply; but if the editor's account is to be relied upon, he would calculate that one half the labour and expense might be saved. The people in this part of the country have not yet had an opportunity of seeing the air-tight stove, nor would they have known of it, perhaps, but through the pages of the Cabinet. In the event of its still continuing to be approved, would it be too much to ask if a drawing of it could be furnished, with directions for its use, and any observations that might be thought interesting to persons at a distance from the place of manufactory. If all is, as has been represented, a great many stoves would find, in this part of the country a ready sale. An early attention to the subject would oblige, as the weather just now admits of no delay. S. R.

30th of Nov., 1842.

We endorse with pleasure and satisfaction our account of Orr's air-tight stove. It has never deceived or disappointed us, but still continues, after a year's experience, to be the greatest comfort and the cheapest luxury in our household establishment. In every instance have our calculations been verified, and often indeed have we been led to observe that our estimate of its value has been below its merits. We commenced the present season with another of these stoves, and have now two in constant operation, with reason to repeat, that we expect to save about the cost of the stove in fuel during the year. There is still another convenience to be added to those enumerated by our former correspondent, J. C. M. at page 173, vol. VI., to which we refer our readers; and which we experienced the value of during a time of sickness, when the stove, carefully closed, with the fire in it, was removed to an upper apartment by a single individual, and placed in its proper position in two minutes; and in less than a minute after, was blazing away, without the labour, noise and filth of lighting, or the loss of heat consequent on a first kindling.

It must be remembered, they are designed for the consumption of wood only; the desideratum being, to be able to ignite and extinguish the fire suddenly, which could not be effected if coal were used. If on closing entirely the stove at night, it be found in the morning that the fire has been *completely* extinguished, it can be re-kindled by burning a piece of paper on the remaining charcoal, and the heat will be found instantly to penetrate the sides and top of the stove without further trouble.

It gives us pleasure to be able to furnish an engraving of the air-tight stove for the satisfaction of our correspondent; and to inform, they are now made of very superior material and workmanship, by W. W. Hughes, agent to the patentee, No. 45 Walnut Street, Philadelphia, at the prices of 7, 8, 10 and 11 dollars, according to size and embellishments. The seven dollar stove is large enough for the chamber; while that at ten dollars, is suitable for a large parlour, or for two rooms, communicating by folding doors. When the stove is removed at the end of the winter season, it should be well cleaned inside, and receive a coat of linseed oil inside and out, which will effectually protect it from the effects of the atmosphere. James Pedder.

For the Farmers' Cabinet.

Magnesian Lime.

Messrs. Editors,—Your correspondent, B. Webb, throughout his ingenious essay which appeared in the last number of the Cabinet, has wholly overlooked or mistaken the objects I had in view, in the essays on magnesian lime. He has set up a target of his own manufacturing, at which to let fly his arguments. The real question at issue, is not whether magnesia or sand is useful as manure, or whether any farmer would buy sand or magnesia, instead of lime, at the same price, if he had his choice. At least I never made such an issue, and shall not therefore undertake to defend the side he has assigned to me in the discussion of it. I have never undertaken to show, that magnesia is of itself useful as a manure. I have never even said that magnesian lime was superior to pure lime as a manure. I only ventured to make some suggestions on this point, as interesting and important subjects of inquiry to the practical farmer, and to which I intend again to direct his attention.

The doctrine of Tenant and his followers, it is well known is, that "magnesian lime, (not magnesia,) is exceedingly injurious to vegetation." Now, in opposition to this I did say, and again repeat the offence, if it is one, that the whole experience of the farmers of South-eastern Pennsylvania, is diametrically opposed to this doctrine; and that whatever improvement they owe to lime, it is to magnesian lime and to no other. I mean, however, only to speak in general terms;—I do not assert there is no limestone in that part of the country free from magnesia, or containing only a small portion of it. What I assert is, that the lime has been there generally used, without any knowledge whether it contained magnesia or not, and without any such perceptible difference in the effects of different parcels, as to induce the farmers to quit one kind and adhere to the other. And further, that some of the quarries, the lime from which has long been held in high estimation for agricultural purposes, have been found upon analysis to be highly impregnated with magnesia. Are these facts or not?

If your readers will turn to the essays I have heretofore sent you on this subject, I think they will labour under no misapprehension as to the issue I have made. I have again and again stated it as a fact, that magnesian lime has proved highly beneficial to the agriculture of South-eastern Pennsylvania, and challenged contradiction, if it be not so. And who has controverted it? Not any one. Even your correspondent admits it; for he says, "no one has ever denied it,—no one has even insinuated that magnesian lime is not beneficial to the soil." Now, here one would suppose the controversy ought to end, for this position is all I ever really contended for. But Mr. Webb has entered into a long investigation and argument, to show that *magnesia* is deleterious, or at least valueless as a manure; and that if magnesian lime has proved beneficial, it was owing to the lime it contained,—the good effects of which were more than sufficient to counteract the bad effects of the magnesia, and that in no case can we expect that a mixture of lime with foreign substances will be equal in value to lime in a pure state. The fair inference from which I presume is, that magnesia and other foreign substances, if not actually deleterious, when combined with lime, must at least be inert and valueless; and consequently, that the quantity used, must be increased in the proportion at least of the foreign matter contained in it, to produce the desired effects. But is this the fact so far as relates to magnesian lime? In that part of the country where this kind of lime has been longest in use, I believe 60 bushels are considered about an average dressing for an acre of land, and from such dressings very beneficial effects have been derived; while of mild or pure lime, from 50 to 200 bushels are considered as a moderate dressing, and as much as 500 or 600 bushels have sometimes been spread on an acre with advantage, at least so say the books. Now, the natural inquiry is, does this increased quantity of pure lime produce increased beneficial effects over the limited quantity of the magnesian? Will an acre of land dressed with 600 bushels of pure lime, yield ten times as great an increase of crops, as one dressed with 60 bushels of magnesian lime? This is the only point, as I conceive, now at issue between us, which is at all likely to interest the farmer; and it is one that has hitherto been pretty much evaded or overlooked by the advocates of the superiority of pure lime.

The experience of the farmers of South-eastern Pennsylvania, continued through a long course of years, and spread over a wide district of country, containing a great variety of soils, having fully established the fact, that magnesian lime is not necessarily deleterious to vegetation, but that the Pennsylvania variety of it at least is highly beneficial, the next most material point to be investigated is, what is its economical value for the purposes of the farmer, in comparison with pure lime. Is it more or less costly, to use in proportion to the good effect produced?

To procure pure lime in sufficient quantities for agricultural purposes, we must resort to beds of stone containing it, if any such are to be found. The cost therefore of this kind of lime, cannot be much less than that of the common magnesian variety, for in both cases the principal value or cost of the article, is the labour and fuel employed in its production. Now, if we suppose that four times as much of the pure, as of the magnesian, may be used at a dressing, it will evidently cost nearly, or prehaps quite, four times as much in the one case as the other. But will there be four times the benefit, present or prospective, derived from the pure lime as from the magnesian? Because, after all our discussions, this is the point most interesting to the practical farmer. According to Mr. Webb's doctrine, there ought to be even a greater difference than the above. To the farmer we must refer the point for a satisfactory solution.

Should Mr. Webb even succeed in establishing the position, that magnesia is deleterious to vegetation, I cannot perceive what relevancy it would have to the subject in hand. It is not about the properties of *magnesia*, but of *magnesian lime*, that we are inquiring. In the latter case, the magnesia is in a state of intimate union, perhaps of chemical combination, with the lime. In this state it may produce effects, that neither of its constituents would do singly. It is altogether uncertain, whether if the two earths were mixed together artificially, in the proportions found in nature, they would produce the same effect as the native magnesian lime does. Bodies chemically combined, often possess very different properties, from their constituents,—sometimes more active, sometimes more inert,—and in this state may be capable of entering into further combinations, which their constituents are not. The combination of lime and magnesia may neutralize some acid,—exert some pulverizing power on the soil, or some quickening or solvent power on inert vegetable matter, which neither of its constituents would do singly. These questions, however, are but of secondary importance to the farmer. The great leading one is, the comparative value of the two articles as a manure.

S. Lewis.

Pottsville, Nov. 24, 1842.

It is stated in the New England Farmer, that B. V. French, Esq. of Braintree, Mass., raised more than 22 tons of white carrots per acre. And he thinks that subsoil ploughing his land in the spring of 1841, contributed very much to increase the crop of 1842.

The Backwoodsman.

BY EPHRAIM PEABODY.

The silent wilderness for me!
  Where never sound is heard,
Save the rustling of the squirrel's foot,
  And the flitting wing of bird,
Or its low uninterrupted note,
  Or the deer's quick crackling tread,
And the swaying of the forest boughs,
  As the wind moves overhead.

I stand upon the mountain's top,
  And (solitude profound!)
Not even a woodman's smoke curls up
  Within the horizon's bound.
Below, as o'er its ocean breadth
  The air's light currents run,
The wilderness of moving leaves,
  Is glancing in the sun.

I look around to where the sky
  Meets the far forest line,
And this imperial domain—
  This kingdom—all is mine.
This bending heaven—these floating clouds—
  Waters that ever roll—
And wilderness of glory, bring
  Their offerings to my soul.

My palace, built by God's own hand,
  The world's fresh prime hath seen;
Wide stretch its living halls away,
  Pillared and roofed with green.
My music is the wind that now
  Pours loud its swelling bars,
Now lulls in dying cadences;—
  My festal lamps are stars.

Though when, in this my lonely home,
  My star-watched couch I press,
I hear no fond "good night"—think not
  I am companionless.
O no! I see my father's house,
  The hill, the tree, the stream,
And the looks and voices of my home,
  Come gently to my dream.

And in the solitary haunts,
  While slumbers every tree
In night and silence, God himself
  Seems nearer unto me.
I *feel* his presence in these shades
  Like the embracing air;
And as my eyelids close in sleep,
  My heart is hushed in prayer.

Domestic Economy.—One of the great arts of Domestic Economy is greatly overlooked. If we would bring our philosophy into play, and regulate our *wants*, by our *means*, instead of continually toiling to bring our circumstances up to our wants, what a vast amount of suffering, would the world be spared! *Wants* are very apt to be ahead of *means*; and if you set the *latter* to chasing the *former*, there will be no end to the race. By putting the yoke upon the desire of acquisition, we need not fear, that *industry* and *enterprise*, will be discouraged. It is well to remember the saying of Cotton,

> "In this the art of living lies;
> "To want no more, than may suffice,
> "And make that little do."

For the Farmers' Cabinet.

The Hessian Fly.

A few years ago I commenced the business of farming, more for the purpose of a pleasant relaxation from professional life, than with the hope of gain; and my fondness for the occupation, has led me into many experiments and much close observation of things, pertaining to the subject of agriculture; and I do not know but it may lead me to trouble you and your readers occasionally with the result of them. If I supposed I could add any thing to that spirit of enterprise, which you and others seem to have awakened among the farmers of this day, or suggest an idea which a practical farmer might turn to a valuable account, I should feel gratified. In my pursuit of information on this subject, whenever I have found an opinion with regard to a fact,—a cause, or an effect, to be generally entertained by farmers whose attention has been called to the subject, I look upon it as entitled to respectful consideration, even if it does not at once command entire belief; it is worth a book of philosophical theory.

As you know, this is a wheat growing district, and our farmers may be supposed to know something of whatever concerns the cultivation of that grain. They entertain an opinion with regard to the Hessian Fly and its appearance, which is natural, and which my own observation has convinced me is in accordance with the truth. It is a big-bellied insect, which makes its appearance in the fall, when the mildness of the weather will admit, especially at that season called *Indian summer*, and its coming is easily discovered; when it alights upon the ground, it divests itself of its wings and assumes the appearance of a large black ant, and from its hurried manner, seems to be seeking a place of deposit for its egg; this it soon finds, either in the crevices of the ground, under a clod, or in the wheat plant; and not always in the latter as is sometimes supposed. After the egg is deposited, the insect seeks shelter for itself in the ground, where it remains during the winter; and either it or its progeny appears again in the spring, to go through the same work of destruction. The opinion is entertained by some, that the egg deposited in the fall, remains to be hatched in the spring,—but not so; nature makes better provision for her creatures, than to cause the egg to be laid in the fall, exposed to the frosts of winter, to be hatched in the spring. The egg laid in the fall does its injury to the grain, then or not at all; its effect is then perceptible; and it is the re-appearance of the fly in the spring which repeats the evil. My observation h convinced me, that this is the Hessian Fl and that there is a most infallible remedy its destruction—as certain as it is simple the use of the Roller. A very little ca and observation, at that season of the ye when the farmer expects its approach, w discover its presence; and then is the tim whether it be spring or fall, to roll the whe fields: the weight of the roller not only d stroys the insect itself, whose size and sha prevent escape, but it destroys also the te der egg, whether deposited in the whe plant or elsewhere. I have used the rol for six years, and I have never seen the fect of fly in my wheat; while crops arou me have been partially destroyed by it.

W.

Carlisle, 30th of October, 1842.

History of War.—"I wish I owned the pasture land in the world," said B "Well, I wish I owned all the cattle in t world," said Ned. "How could you fe them?" asked Bob. "I'd turn them into yo pasture," said Ned. "No, you wouldn' "Yes, I would." "No, you *wouldn't.*" "Y I *would.*" "You *shan't.*" "I *will.*" Th came the fisticuffs, and there was a dra battle. First, one was uppermost, and th the other, for the *animals* were pretty nea matched. At length, by some unlucky mo ment, Ned got undermost, and in such d couraging circumstances, that he had no ho of retrieving his *fallen* fortune. "*Wo* you turn your cattle, into my pasture," ask Bob, "if you owned all in creation, and owned all the land?" "No, I wont!" cr Ned. And these *brave* fellows let go th gripe, and again stood erect. But thou Ned had, for the moment, succumbed, spirit of *fight* was still rife in his boso Watching his opportunity therefore, he thr himself with his whole force, upon unsuspe ing Bob, and made him, in his turn, feel t his own case was hopeless. "Will you me turn my cattle into your pasture?" quired Ned, accompanying the inquiry w a thrust into the *midriff,* which seemed *hurry* the spirit of accommodation into hi "Yes, I will," shouted Bob. They again up, and "shook their plumes,"—these p niless vagabonds—and *felt* how nobly th had struggled for their *rights!*

Let no man be ashamed to work. Let man be ashamed of a hard fist or a sunbu countenance. Let him be ashamed only ignorance and sloth. Let no man be asha ed of poverty. Let him only be ashamed idleness and dishonesty.

xtracts from an Address lately delivered before the Chester and Delaware county Agricultural Society, by Paschall Morris, Esq., of Allerton Farm, near West Chester, Pa.

“The high honour of introducing the tur-
culture into England, belongs to Lord
wnsend. His attempts were ridiculed and
nself made the object of derision, by being
led *turnip Townsend;* he, however, lived
ng enough to see his favorite culture ex-
nd, and to feel himself a benefactor of his
untry; in half a century the turnip spread
er the three kingdoms, England, Scotland
d Ireland, and its yearly value at the pre-
nt day, is not inferior to the interest of
e national debt,—its culture being worth
ny millions sterling to the single county
Norfolk!

“The next great era in English agricul-
re, was the work of Jethro Tull, introduc-
y to the drilling and horse-hoeing hus-
ndry. His idea was, that the thorough
lverization of the soil and the extirpation
weeds, were the only requisites to success-
culture; and he went so far as to assert,
at the only use of manure was to divide
e soil and render it permeable to the at-
osphere; which could be better performed
ploughings and stirrings; and it cannot
denied, that his system is to this day the
sis of the superiority of British agriculture,
hough his enthusiasm, probably carried
n too far in defence of his favorite theory:
d we have all experienced the advantages
repeated hoeings amongst corn, even after
e weeds have been eradicated, by the ex-
sure of fresh surfaces of earth to the at-
osphere, so as to enable them to absorb the
ferent gases, which by the greater poro-
y of the soil, are carried down to the ab-
rbent vessels of plants: and I have this
ason realized the benefits of Tull's system,
the cultivation of a crop of sugar beets,
giving the land two extra ploughings and
peated harrowings, before sowing; the
fect being the destruction of millions of
eeds; and this is precisely Tull's theory.
these two men, therefore, Lord Townsend
d Jethro Tull, and the many other able
d scientific writers, who have contributed
spread the principles and practices which
ey originated, are we indebted for more
id happiness, than to the schemes of all
e politicians that have flitted on the stage,
om that day to the present; they were the
al benefactors of their species, animatod
the noblest kind of ambition,—that of
ing good.

“The same age is also strongly marked
other striking characteristics, such as a judicious rotation of crops, improved machinery and farming utensils, the improvement of live stock, the use of lime, the formation of agricultural societies, and the great increase of agricultural authors, amongst whom Arthur Young and Sir John Sinclair, stand conspicuous. Those who do not appreciate the benefits arising from agricultural societies, and who ridicule agricultural publications, under the epithet 'book-farming,' would do well to trace the causes which have produced in England a system of productive agriculture, which has no parallel in history, and which enables her with an extent of territory not larger than one of our states, to sustain a population greater than that of our whole country. Such an examination would show this to be the result, first, of the speculations of her scientific writers; second, to the early formation of agricultural societies, and thirdly, to the wise policy of her government in protecting her home industry, and encouraging her manufactures; to afford at all times a good and certain market for the produce of her farmers. The unerring maxim, that the prosperity of every state, is indissolubly connected with a high state of agriculture, and that whatever tends to uphold that interest, upholds every other, has never been lost sight of by her statesmen; and from her restrictive policy, except in cases of extreme necessity, she has never varied.

“I know it is customary to meet every attempt to introduce the practices of other countries amongst us, by alluding to the high price of labour, to the difference in soil, climate, and other circumstances; their plans are said to be too expensive; but the true question is, not whether a new system will cost more than our own, but whether it will pay for that cost? If it will, the argument on the score of expense must fall to the ground. And as to labour, it is the opinion of those who have examined the subject, that there is not so vast a difference as is generally supposed, our working days being more numerous, in consequence of our drier climate. Then we have our long, mild autumns; our implements are much better than theirs, while our climate is natural to their crops, and peculiarly adapted to the growth of that king of vegetables, Indian corn, which has been denominated the meal, meadow and manure of the farmer.

“It is often made a sufficient objection to an innovation, that it comes from England, and is, of course, unsuitable for our adoption. Now, although it be true, that many of her operations are impracticable here, it should be recollected, that the *science of agriculture* applies to us, as well as to them;

the laws which control vegetable life; the substances of which plants consist; the sources from whence they derive their food; the constitution of the atmosphere, the laws of chemical combination; the constituent properties of manures, and the correct mode of their application, are the same in both countries, and the same *every where;* that the splendid stock which this day graces our exhibition, and is a credit to the country; and the improvement in the breed of our cattle, sheep, &c., which pervades every part of the country, and contributes so much to its national wealth, are all founded on English importations; and that the breeding of stock in England is reduced to a science, to the successful pursuit of which, by a Bakewell, an Ellman and a Colling, we are indebted for our Bakewell and Southdown sheep, and our unrivalled Durhams! We are comparatively a new country, with but limited experience; and while we boast the same anglo-saxon blood in our veins, and derive from her our laws and language, must we reject the light which has been poured upon the most important pursuit of man, by her scientific authors, merely because it is English? A thorough imitation of the methods there practised, is not recommended, but it is an interesting question, how far they can be adapted to our circumstances. It has been ascertained, that lands in England yield larger averages of produce, than they do in this country; for in their best cultivated districts they name 40 bushels of wheat, oats 60 to 80, potatoes 400, rye 30 to 40, turnips 30 tons; every acre maintaining an inhabitant; but then they appear to excel us in a more thorough preparation of the ground for crops; complete extirpation of weeds; judicious alternation of crops; greater care in the management and application of manures, and the breeding of stock.

"My own limited experience seems to preclude the propriety of making any suggestions, as to the advantage of altering any of our present courses of management; but I would venture a few remarks on two or three heads, which I am not able to perceive but are as applicable here as any where; and first, with regard to the ploughing and preparation of the ground, for this is one of the most important operations of the farmer. There is reason to fear that this is done in some places by merely skimming the surface; but in England it is considered so material, that it is in a measure separated from the other business of the farm, and made a distinct occupation, in which constant practice is considered essential to success; the very large premiums offered at their ploughing matches, creating a great stimulus to skill. The great objects in ploughi
should be, to break up the whole surface
the field, to give the greatest exposure
fresh earth to the atmosphere, and to p
duce the most complete pulverization; whe
these are accomplished, there is a more ev
growth of crops; the frequent repetition
the harrowings reducing the soil to a
able finely pulverized mass, presenting m
points to the atmosphere, and increasi
greatly the power of absorbing moistu
over a hard and compact surface, especia
in hot and dry weather. Then again,
plough too shallow; deep ploughing is
absolute essential of good farming in eve
well-cultivated district; it is founded on c
rect theory and sustained by successful pra
tice: for as plants absorb food and moistu
from the earth by their roots, which pe
trate it in all directions, of course the deep
the more friable and open the soil, the f
ther they can go, and the more vigorous m
be their growth. The mould in some of
best lands not being more than four or f
inches deep, we seem to feel the great
dread of going below it and bringing up
clay; consequently we suffer inconvenie
both from drought, and an excess of moi
ure; in a dry season the roots of plants
being able to force their way through
compact subsoil in search of moisture a
greater depth, and in a very wet season, t
same subsoil preventing an excess of mo
ure from passing off, and retaining it in
great quantity about them. "The frequ
renewal of the air by ploughing and the p
paration of the soil, especially in contact w
alkaline metallic oxides, the ashes of c
burnt lime, or limestone, changes the put
faction of its organic compounds into the p
process of oxidation; and from the mom
at which all the organic matter existing
a soil enters into a state of oxidation or
cay, its fertility is increased." Prouty's s
soil plough, recently come into notice,
probably destined to effect a radical char
in obtaining a deep tilth; it obviates at
same time, the objections of those who
opposed to turning up the subsoil, on acco
of the injury sustained by the first crop;
is simple in its construction and easily m
aged; it follows the common plough in
same furrow, stirring up the subsoil to
depth of six or eight inches, but not turn
it over. It has been tried in the state
Delaware and other places with great s
cess, and will soon form an appendage
every good farm. It is perhaps not goi
too far to assert, that the subsoil plough m
effect for agriculture, what steam has d
for manufactories.

"In respect to root culture for stock,

me has gone by when its success was eemed problematical, and I have entire con- dence, that before twenty years shall have ssed, roots will be considered as indispen- ble a crop as Indian corn or potatoes. One eason why they have not made their way ster, is owing to the extravagant calcula- ons which ushered them into notice,—they ere to supercede not only the use of grain, ut also of hay! They were accordingly fed n some places at the most extravagant rate, n the principle, if only a moderate quantity roots produced such benefit, a larger uantity must produce more; and this me- hod of feeding not answering the purpose, e culture of them was discontinued. From y whole experience I can say, I have fed em to uniform advantage, to cows and ung stock, supplying succulent food at a me when they generally fall away for want it; promoting the secretion of milk and e flavour of butter, and keeping them in e healthy condition, without the usual in- rruption to thrift by a change from pasture dry food. By making an estimate of the uantity of corn annually fed to stock in hester county, and deducting one third, hich is a low estimate, of what might be ved by combining with it a portion of roots, n idea may be formed of the benefit to be rived by an extended system of root cul- re. Another advantage is, they are not eat exhausters of the soil, for by their oad leaves they derive a principal part of eir nourishment from the atmosphere; hile the grains, such as wheat and oats, ith narrow leaves, obtain their nourishment iefly from the soil; and it is ascertained, at all plants which mature their seeds on e ground, impoverish a soil much more an do those that are cut green. And hen they are made to alternate between o of our grain crops, they will obviate the jection to raising the same species of plants succession.

"But the proper collection and application manure, after every thing else is said, is e grand secret of fair management. All ops exhaust the land more or less, the eans of renovation existing in manure, the rmer's gold mine, the capital on which conducts his business! and yet, the too mmon practice in this neighbourhood, is to low the accumulations of the winter barn rd to remain unmoved until the succeed- g fall, when it is applied to the wheat; but the combined action of the sun, wind and in for so long a period, there must be a great ss sustained; and add to this, it is not un- mmon to see at the time of heavy rain, from any barn yards, a stream of liquid manure wing off into the road or the nearest ditch, which is totally lost! The continuance of this through the whole season, may be compared to repeated infusions of a certain quantity of tea, so as to exhaust it of all its strength, and then to make use of the residuum. The loss arising from this, is probably two-thirds: by estimating the increased value of the crops of Chester county from the application of two-thirds more manure to each farm, an idea may be formed of the extent of the evil. This is one among the many illustrations which might be given, where sound theory should be combined with practice; agriculture has received its present impulse, not so much from chance discoveries and experiments of the farmer, as from the labours of those whose assistance he generally rejects. For most of the improvements in English agriculture, which so eminently distinguish her, she is indebted to the researches of men denominated, 'book farmers,' but who, soaring above prejudice, and animated with true public spirit, devote their time, their talents and sometimes, their fortunes to the cause of agricultural improvement. The objection against this class of persons has been an impediment here to the progress of the art, but it is as unnatural as unjust. No one objects to converse with his brother farmer on matters relating to their common business,—to compare their experience, and we all have derived advantage from visiting other sections of country, and contrasting its soil, its crops and its cattle with our own, and this is all very well; but so soon as the information thus acquired is transferred to print in an agricultural paper, for the greater convenience of transmission, it immediately becomes 'book farming,' and is avoided as an unclean thing! No doubt, much has been written which could never be made available in practice, but the mischief done in this way, has been trifling and transient, while a spirit of inquiry has been aroused, productive of positive benefit. It is not expected that farmers should find time to become profoundly versed in chemistry or natural philosophy, but if there is one business of life in which a moderate acquaintance with the sciences is at all necessary, it is certainly farming. In all his operations there may be application of chemical knowledge; every plant requires for its support and growth, such food as is found on analysis to enter into its composition, and all vegetable matter is resolvable into certain elementary substances; then we have mineral, animal, vegetable manures, some nutritive, some stimulating, and some acting mechanically, and all differing in their composition; and how is the farmer to act with judgment in his application of them, without such knowledge? The great increase of agricultural publications and agricultural societies, within two or three years, is one of the surest evidences, that the profession of the farmer is about to assume its proper importance in society; these have paved the way to improvement in other countries, and they will do the same here."

Rust and Mildew, on Wheat.

In the Farmers' Gazette for October, is an allusion to the Report made to the New Jersey Agricultural Society, in relation to *rust*, &c. in *wheat*, which was published in the Cabinet, three months ago. The Gazette inquires, "were the fields of wheat, mentioned in that Report, manured? If so, with what kind of manure, and at what time before sowing?" We wrote to the President of the N. J. Agricultural Society, requesting him to enable us to answer the above inquiries. His reply, kindly and promptly furnished, we publish below.—Ed.

Dear Sir,—I duly received your communication on the subject of *mildew* and *rust* on wheat. After making the proper inquiries of my neighbour White, I will now answer as definitely as the circumstances permit. Your questions in order are, "were the fields manured? if so, with what kind of manure, and what time before sowing?" I will name the kind of soil, it being important in a careful examination of the subject, as I have observed frequently, that a deep, moist, rather wet soil, is much more inclined to mildew and rust, than a drier and more friable one. As my neighbour White's field is within four hundred yards of my door, I have frequently examined the soil and growth of grain on it; half the lot is good sound loam, very productive in grain; this part had no manure for that, or for several previous crops; the other half, is a drier soil, having a mixture of shell and gravel, and is very productive; this was manured with a light quantity of well rotted barn-yard manure, some weeks before sowing. This part was not quite so forward as the first mentioned, nor so large, having many apple trees in it; the shade kept it back, and, as mentioned in the report, kept off the intense rays of the sun, and it was less injured by the rust. Perhaps its being a little more backward, and not in the exact state in which the heat of the sun has so ruinous an effect upon it, might have had a tendency to save it.

One half of my own field is a rich loam of excellent quality, rather moist, producing heavy crops of any kind, when well managed; the other half is a red loam, some shell and gravel—a superior soil, being drier, and more friable, but not so rich. This part had a light dressing of very rotten manure, har-
rowed in with the wheat, sometime bef
sowing. This is the part mentioned in
report, of most value; it was a little m
advanced toward maturity than the oth
when struck with the rust. These la
are some of the best in the place.

I have taken much satisfaction in answ
ing your questions, and shall be gratifie
they give any light on the subject.

The view the committee took of the s
ject, they think was strongly confirmed
present season by close examination of
wheat, while ripening.

Respectfully yours,
Caleb Smith Green

Lawrence, November 8th, 1842.

New Method of Grafting Apple Tre

Plant the seed in rows at a suitable
tance from each other, and the hills,
about five feet apart in each row. But
tree should be suffered to grow in a pla
Now when the young tree is sufficien
grown, in the spring of the second or th
year, any quality of fruit may be grafted i
it in the following manner: First, bend
tree over, and obtain for it a firm rest
place, either on a block, or a board, rest
on the knees, (after it has been diveste
its branches,) and with a stout sharp-poin
knife, pierce holes directly through the c
tre of the tree, about five inches apart, i
which the scions are to be introduced—le
ing above, two or three buds. A trench
then to be dug, in a direct line between
trees, about four inches deep, and the wh
tree bent down and buried, leaving the t
of the scions above ground. In this new c
dition, the scions become uniformly thr
young trees, supported and nourished fi
the buried tree, from which issue, in
time, roots from its entire length. The
cond year from this operation, the whole
rent tree may be dug up, the new gro
sawed apart and transplanted. It will t
be seen that if the tree is five feet in heig
ten or twelve young trees, of whatever q
ity is chosen, may be obtained in this w
whereas by the ordinary method of grafti
there could be but one, provided the g
lived. The young scion will bear fruit t
transplanted, in the same time it would,
it been grafted into a tree fifteen years

I know not whether this process is n
among your agricultural community at
North; but I have repeatedly witnessed i
Georgia and Alabama, and I have been
formed by some of the best horticulturist
those States, that it is always successful.

Yours, respectfully, Henry L
Con. Farm. Gazette

Manuring in Germany.

To the Editors of the Farmer's Cabinet.

THE following extract of a letter from M. eyher, of Baden, was translated from the erman by Mr. Goundie at my request, with view of offering it for publication in the abinet. It exhibits an example of the in- rest felt for the institutions and agricul- ral improvements of our country, by great umbers of intelligent Germans, of which ass the writer of the letter is a fair repre- ntative.

The bond of union formed with Germany, the immense emigration from that coun- y to the United States, must in the absence all causes of national hostility, create a eep reciprocal feeling of regard.

MORRIS LONGSTRETH.

Valley Green, Nov. 1, 1842.

xtract of a letter from Schwetzingen, near Manheim, in Germany, dated July 30th, 1842.

o G. H. Goundie, Bethlehem, Pa.

"Permit me to tender you my best thanks r the almanacs and sundry other, to me, ost interesting pamphlets published in your eat country. By means of your press, we our distant land, become more fully aware the habits, mode of living and enterprise the North Americans; and certainly it is infinite gratification to every German, at so many of his countrymen there, be- me happy and comfortably established, and me even attain to a degree of affluence. ut very recently an application was made our Chambers, not only from the Grand uchy of Baden, but from the other confed- ate states of Germany, containing about ,000,000 inhabitants, that emigration to merica might be generally encouraged; hich motion was warmly seconded by our rand Duke. Should Austria and her Ger- an provinces, Hanover, and the Hanseatic wns, (as we have every reason to believe) in in encouraging emigration, then indeed ight we consider our Father land blest; truly tisfactory would it be, to know so many of r countrymen inhabitants of the New orld, still in bonds of union with us. Re- procal commercial relations would become ore flourishing, which would be of the most gnal advantage to both countries. May od, in whose hands are the destinies of na- ons, grant his gracious blessing thereto.

"In one of the above mentioned almanacs, also find an advertisement under the head f 'Useful varieties,' as follows: viz. 'Prepa- tion of a newly discovered compost:' and fur- er, 'a number of years ago, a premium was ffered for the invention of a new compost; the prize was awarded to some persons, and publicity made thereof in the agricultural journals of that day, in order to place the same within reach of the whole agricultural community.'

"Try and procure for me the Journal or pamphlet containing the preparation of said compost; it is of the greatest consequence to us. I am confident we might be enabled thereby to raise one-third more produce per acre from our fields. The only thing wanting, is a compost, which is not too expensive.

"To the irrigation of our meadows, the greatest attention is paid at present, in order to enable us to stall-feed more cattle, and thereby obtain more manure; but this is attended with a great deal of expense, and nevertheless, not enough can be obtained to make our farms as productive as they might otherwise be. Stable manure at present, sells for quadruple the price it did 10 years ago; and to give you some idea how eager the farmers are to procure the same, let me inform you, that the farmers of Oftersheine purchase the same in the city of Manheim, a distance of 10 miles, at an extravagant price, and haul it upon their farms. I myself having what is generally called plenty of litter, purchase annually from $500 to $600 worth of manure. Your friend,

"FEYHER."

FEMALE DELICACY.—Above every other feature which adorns the female character, delicacy stands foremost within the province of good taste. Not that delicacy which is perpetually in quest of something to be ashamed of, which makes merit of a blush, and simpers at the false construction its own ingenuity has put upon an innocent remark; this spurious kind of delicacy is as far removed from good taste, as from good feeling, and good sense; but the high-minded delicacy which maintains its pure and undeviating walk, alike amongst women as in the society of men, which shrinks from no necessary duty, and can speak, when required, with seriousness and kindness, of things at which it would be ashamed to smile or to blush; that delicacy which knows how to confer a benefit without wounding the feelings of another, and which understands also how, and when, to receive one; that delicacy which can give alms without display, and advice without assumption; and which pains not the most humble or susceptible being in creation.

UNRULY CATTLE.—If you would teach your cattle to be mischievous, put up a low, or a slender fence at first, and raise or strengthen it as they become expert in jumping.

Poultry.

We are confident most of our farming friends would find that more attention to their poultry yards, would add essentially, not only to the comfort of themselves and their families, but also to the aggregate of their annual farm profits. Without any particular effort, or any extra buildings or yards, from 50 to 100 fowls may be kept on every farm of a hundred acres, and the contributions they will make in eggs and chickens to the products sold, will amount in the end to a very handsome sum. It is true, to be made a source of profit they must receive attention; the eggs must be gathered daily, two or three hens must not (as is frequently the case,) be allowed to sit on one nest; coops must be provided for the chickens, as they are hatched, and they, as well as other domestic animals, must be fed. Fowls will sometimes, perhaps, do a little mischief; if allowed access to grain fields, they will break down and destroy more than they will eat, and if they find the planted corn, they will show a perseverance and dexterity in tracing out the rows, and extracting the plants, worthy of any featherless biped that lives by his wits and the plunder of the public. The true way to put an end to such troubles at once, is to confine the depredators, when you do not wish to kill them; and then a little extra feed is all that is necessary to save both your crops and your fowls.

Domestic poultry usually do much better that run at large, than they will if restricted to narrow limits in the coop or yard. Their health is improved, their flesh is finer and better tasted, and they will produce more eggs, at large, than in confined situations. The turkey, in particular, is a strenuous advocate of the largest liberty. Hens in a garden are a pest, but there is no necessity of being troubled with them there. A common picket-fence five feet high will effectually exclude them; it being well known that fowls rarely attempt flying over such a fence, and when made plain, such a fence costs perhaps as little as almost any other.

To have the poultry-yard profitable, the fowls should not be kept until they are old. There is no objection to preserving a favourite cock so long as he is active and lively, but hens after three years will not produce as many eggs as those of one or two years. Much, however, is depending on the breed kept, but more on the manner in which they are kept, so far as good layers are concerned.

The Game cock breed and the Bantum breed, are not generally kept, except by amateur poultry breeders; rarely by farmers, as they afford little profit as layers or re ers of chickens. The chickens of the ga cock breed are so pugnacious as to be c stantly fighting with one another, and this way sad devastation is made among broods: the Bantums are so small as to undeserving of notice, except as objects curiosity.

One of the most beautiful of our fowls the Hamburg, or Poland Top-knot, and i also one of the best with which we are quainted. Both Mowbray and Boswell, their works on Poultry, speak highly of t breed; the first saying, "they are one of most useful varieties, particularly on acco of the abundance of eggs they lay, be least inclined to sit of any other bre whence they are sometimes called *everla ing layers*, and it is usual to set their e under other hens;" and the last remarki "this is a kind we esteem above all othe both for their appearance and usefulness, a we regret they are so seldom to be met w pure in this country." Mr. Bement sa "they are hardy, enduring well the extren of heat and cold, although they are not thickly covered with feathers and down, some other breeds. Their colour is o shining black, or a deep glossy changea purple, with a large white top-knot of f thers, covering so much of their head as most to blind their eyes, and often requ clipping. The contrast of this perfectly wh crown with the black plumage, is truly be tiful; but that of the cock differs from t hen, hers being broad and erect feathe while his are narrow and hanging down every direction." We have seen a few stances, in which a small tuft of brilliant feathers existed in the centre of the wh knot, almost realizing the appearance o splendid flower.—*Cultivator.*

How to boil Irish Potatoes.—Good a indifferent potatoes depend very much up the manner in which they are prepared the table. Some cooks always have hea hard, watery potatoes; while others for t most part have them dry, mealy and exc lent. This difference depends generally up the difference of cooking. The common w is to put the potatoes into cold water, b them by a slow fire, and cool them as slo ly; the better way is to put them in boili water, keep up a brisk fire till they are *j done*, take them out immediately, throw wet cloth around them, and gently squee each with the hand till it cracks open, the watery particles to escape in form steam, then peel them, and they are exac right. By this method, almost any potat will do well.—*Nashville Ag.*

For the Farmers' Cabinet.

Strawberries.

A Strawberry bed is considered an essen-
l requisite in the kitchen garden, and the
rmer who is desirous of a supply of this de-
ious fruit, should not neglect to allot a por-
n of ground to this object. It is not only
delicious fruit, but is conducive to health,
d said to be an excellent dentifrice. The
rawberry is easily cultivated, is an abun-
nt bearer, may be readily gathered, and is
ore luscious than many other cultivated
its.

The strawberry is cultivated with great
riety of success, and it is to be suspected
e failures that have occurred, in most in-
ances, have been for want of a knowledge
the Dioecious* character of the plants cul-
vated, and of the proper management of
ch variety.

The Magazine of Horticulture for the pre-
at year, contains two communications from
. Longworth of Cincinnati, Ohio, together
th some judicious observations by the ed-
or, tending to establish the Dioecious char-
ter of all the large fruited variety of the
rawberry; and directions how to manage
em, so as to insure an abundant crop of
rge fruit. He says, "there is no straw-
rry that produces abundantly and very
rge fruit, where the stamens and pistils are
rfect in the same blossom."

"In raising from seeds, both kinds are pro-
ced; but if suffered to run together, as the
aminate vine is the more vigorous, it will
ake ten new plants where the pistilate vine
oduces one, and will soon root out all the
aring plants." That "neither will pro-
ce a perfect fruit when separated from all
hers, nor would either ever produce a plant
a different character." That "in all the
onthly and white varieties of the strawber-
, that I have seen, the pistils and stamens
re perfect in every blossom, and as a natural
nsequence the fruit is never large."

"That no good fruit can be expected where
ere are no stamens or where there are sta-
ens only.

"Perfect flowers answer as well for fer-
lizing the stile bearing plants, as flowers
ith stamens only, and as they give fruit
re more profitable."

"In cultivating any of the large variety,
ch as Hovey's seedling, the Hudson, Meth-
en, Downton and some others, it is only
ecessary they should be set in a bed with a
w of early Virginia, or some other fruit-bearing plants of a favourite small variety among them."

In preparing the ground, for a new plantation of strawberries, it should be made loose and fine, cleared of weeds, and particularly of the roots of white clover and other grasses, as they are a great annoyance in the after culture.

The roots may be planted in either spring or autumn, as most convenient. If planted in the spring, unless a large quantity of earth is removed with the roots, they cannot be relied on for much fruit the first season, but will become well established, and if kept free from weeds, grass and the runners, will rarely fail to produce an abundant crop the second and succeeding years.

If planted in the autumn, they are liable in some places, to be raised out of the ground by the frost, the first winter. My neighbour B. considers the offsets of the old plants much better for a new plantation, than the plants produced by the runners. These offsets he separates and plants about the twenty-fifth of the eighth month, preferring this time that they may become established before winter, and produce a good crop the next year.—About the middle of the ninth month he clears his beds from the accumulated runners and the plants growing from them, together with all other impediments to a neat cultivation and appearance; and but few farmers succeed in raising them better, or in producing a more abundant crop. M.

Bucks County.

Small Productive Farm.

I raised, the past year, from 30 acres of land, 700 bushels of potatoes, 80 bushels of barley, 25 bushels of beets, 15 bushels of wheat, 10 bushels of beans, 4 tons of mowed oats, 6 tons of English hay, 10 tons of meadow hay, 40 bushels of corn, 20 bushels of carrots, 75 chickens and turkeys, and a great variety of garden *sauce*. I have killed one hog, weighing 390 pounds, made 400 pounds of butter, kept three cows, a pair of oxen, two heifers, two steers, eight sheep, and four hogs. I have been on the place but two years, and have laid six acres of land to grass; the land a clay loam, easy to work, I have no convenience for my hogs to graze, neither do I believe it economy, for the extra manure that can be made by yarding them, will pay the extra feed. I mix lime with my compost, and plaster my corn, potatoes and grass. I sort my potatoes before sale, and by that means save half a peck per bushel, which would be lost to me if not sorted. Finally, I cook every thing I give my hogs, and feed warm and *keep warm*. A. T. Perkins.

Maine Farmer.

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* *Dioecious* plants, are those which have the *stamin-*
e and *pistilate*—that is, the male and female, flowers
n distinct plants.—Ed.

For the Farmers' Cabinet.

Philadelphia Agricultural Exhibition.

Messrs. Editors.—Your correspondent "Z," in a communication under the head of "Agricultural Exhibition," in the last number of the Cabinet, undertakes to give a history of the cattle show, held at the Rising Sun on the 12th and 13th of October, last. With some things he appears to have been wonderfully pleased; but it is not at all difficult to discover, that his real object is to bring the Society into disrepute; and further, that he is blessed with a good share of presumption. He begins his complaints by noticing, that many of the cattle had been on that ground so often as to excite little notice, and that the Society had heretofore lavished their premiums on them in the most extravagant manner. He also notices, that the Prince of Wales has at last been triumphant over Colostra, his old rival; and in the most positive and consequential manner tells you, that "there never was a question as to the merits of the two animals." He speaks of Colostra's defective rump and hind quarters generally; and at once condemns him without a further notice. I do not wish to make a comparison between these two fine animals; they have several times met, and have been examined by the best judges in this section of the country, who have given their opinions of their merits, and with them I let them rest; but I must say, that the man who finds fault with Colostra's rump, or hind quarters, or any other part of him, would expose himself to ridicule amongst judges of thorough bred Durham short-horns. If your correspondent "Z." wants more coarse beef in the hind quarters, I would recommend him to the Teeswater stock, as being most likely to suit his taste. "Z." complains of the uncertain and unsatisfactory nature of the award of judges, and is so disgusted with their ignorance and prejudice, that he has come to the conclusion never to trust any of his stock in their hands. Why, really, Mr. Editor, I feel some alarm for the character of our next exhibition, as we may not have the assistance and support of this very modest, and withal, knowing individual. But to be honest, I do not believe that he owns a good animal, or *knows when he sees one.* Who are the judges upon whom he bestows the epithets, ignorant, inexperienced, and prejudiced? Why, sir, men who are selected from the country round, many from a great distance; chosen on account of their long experience in breeding, rearing and feeding the best stock that the country produces; many of them too have been engaged in the business from 20 to 30 years; honest men, who have good judgment, and are not afraid to exercise it on any occa
where they may be called, and whose c
acters for veracity, will never suffer in
eyes of their neighbours from the insinuat
of "Z." After pouring out his wrath on
judges, he travels out of his way to vent
spleen against Leander, or his spirited ow
I can scarcely tell which. He inquires, if
ander is in any way improved since the t
he was declared by the judges, inferior to
Slick? Now Sam Slick was not on the
hibition ground this year at all, there
they could not come in competition.
mark the question;—he asks if Leander
improved in any way in the last two ye
from the time he was one year old. W
any man, Mr. Editor, having the least kn
ledge of cattle, ask such a silly quest
Leander, one of the best bred bulls in A
ica, in the hands of one of the best bree
and managers of improved stock in the co
try, and not make any visible improvem
in two years! Well, I confess, *that* is ra
discouraging.

The next statement made by "Z," to s
the inconsistency of the judges, is ground
He tells you that Judge Longstreth recei
a premium this year for a calf, the same s
as that exhibited last year, which was
sidered so exceptionable, that the Judge
them removed the first day on that acco
Now, sir, the truth of the matter was, that
judges were unanimous in giving to Ju
L. premiums for his cattle last year,
were only prevented by his mistaking
rules of the society, and not leaving his
tle on the ground until the second day. "
appears to have been equally dissatisfied
the committee on implements, and the re
of the trial of ploughs on the third day.
thing appears to have been managed to
his genius. His plan for disposing of
funds of the society, instead of bestow
them on the most deserving in the shap
premiums, is worthy of him; but before
attempts to advise the society how to
duct their business and dispose of their fu
I would recommend him to become m
respectful and candid towards his fellow
zens, and treat them with more courtesy
confidence than he has hitherto done.

Culle

Philadelphia, Dec. 1st, 1842.

The servant who knows, and who can
thing better than his master, follows his
pleasure in it, which will seldom lead
to waste his strength in increasing the wea
of one whom he undervalues; but he
rather think of his own advantage, and
to obtain the best pay and the most per
sites.—Kliyogg.

The Iron Steamer, Great Britain.

The "Times" gives the following descripon of this gigantic vessel,—the largest in he world. The Great Britain is built enrely of iron, with the exception of the ooring of her decks, and the flooring and rnamental parts of her cabins. She is 324 eet in length aloft, or upwards of 100 feet onger than our largest line of battle ships. Her extreme breadth is 51 feet, and the epth of her hold 32 feet. She is registered ,200 tons, so that her bulk far exceeds that f any two steamers in the world.* She has our decks, the lowest of which is of iron, nd appropriated for the reception of the argo. The upper deck, with the exception f a small break in the forecastle, is comletely flush from stem to stern, without uilding or elevation of any kind, so that, esides the masts and funnel, there will be othing above deck to offer resistance to a ead wind.

The two intermediate decks are approriated exclusively to the use of passengers nd the equipage of the ship, and consist of our grand saloons, forming together a length f dining room, of 350 feet, two large ladies' abins, or family rooms; and one hundred nd eighty state rooms, each containing two pacious sleeping berths, so that besides the ortion appropriated to the crew, steward's epartment, &c., the immense number of 60 passengers can be accommodated, each with a separate bed, without requiring a ingle sofa to be made up in any of the saoons.—The principal saloon is 108 feet long, y 32 feet wide, and 8 feet 3 inches high. Besides the vast space appropriated to the assengers, crew, &c., and that occupied by he engines, boilers, &c., she has sufficient oom for the stowage of 1000 tons of coal, nd 1,200 tons of measurement goods. There re three boilers, capable of containing 200 ons of water, which will be heated by 24 ires, and she has four engines, each of 250 orse power, making in all 1,000 horse ower. Some idea may be formed of her astness, when it is stated, that 1,400 tons of iron have been used in her construcion.

The most novel feature about the Great Britain, is her mode of propulsion, which is by the newly improved screw-propeller, paented by Mr. Smith, of London, with imrovements made upon it, and applied by hat gentleman with complete success, to he Archimedes. The Great Britain will be fitted with six masts, on five of which, a single fore-and-aft sail only will be carried, he mainmast alone being rigged with yards and topmast. These masts will be low, as compared with the size of the vessel, although the mainmast will be 95 feet long, and the quantity of canvass, though inconsiderable to what she would carry as a full rigged ship, will still be as much as would cover three quarters of an acre of ground.

It is difficult to ascertain the precise limits of the speed which she is calculated to perform at sea. Probably the expectations of the directors are greater on this point than they choose to confess until an actual trial, but something considerably exceeding that of any sea-going steamship at present afloat, may be looked for. The rate at which the Oriental steam vessels accomplish their voyages, does not average more than eight miles an hour: the Atlantic steamers about nine, and the most rapid sea voyage yet accomplished, has not exceeded an average of ten miles an hour. It is estimated that the Great Britain will accomplish from ten to sixteen miles an hour, according to the nature of the weather and the sea; and no doubt is entertained that her average will be at least twelve to thirteen miles per hour; taking the lowest of these rates, there would be an amazing increase over the great triumphs of steam navigation hitherto heard of.

Wool.--Michigan.

George Hentig, an intelligent correspondent of the Western Farmer, who writes from Marengo, Michigan, contends that the Southdown, Cotswold, or Leicester sheep, are preferable to the Saxony, both on account of the fleece and the carcass. He very justly inculcates the sentiment, that "a well bred animal will always amply compensate for its good keep." He thinks "more money may be made by raising good mutton, than good beef;" and that our native sheep are not a fair sample of what mutton ought to be. He closes his letter with the following paragraph:

Is it not strange, that among the many emigrants arriving in New York and elsewhere, that scarcely one finds his way into this State? Certainly no State in the Union holds out greater inducements to the emigrant, than does the State of Michigan. There never was a better time for a person commencing on a new farm than the present. We can, at this time, get our openings, or prairies, *broke up* at the low price of twelve shillings per acre, and fenced for less than half that sum; then there is a farm to go on with—no clearing land and waiting 10 or 12 years for the stumps to rot out. I think many that are now working the heavy timbered lands, would soon stop, could they have a peep at our Western country; indeed, I may say, "Western Michigan against the world."

Singular Disturbance of a School.

In the town of St. Antoine, department Doubs, about 4 o'clock in the afternoon of July 27th, three bulls had been fighting in their pasture. One of them finding himself growing tired, took flight, and being pursued by the other two, took refuge in the village school room, at a time when the scholars were all assembled there. Mr. Lepine, the teacher, made vain efforts to drive him out: the bull, pursued by his two conquerors, knocked down the master. A frightful scene then commenced, the furious animals continued the contest with each other in the room where there were forty pupils, upset and broke benches and tables, and even the master's desk.

The master, though at first terrified by the unexpected scene and the tears and cries of the children, soon succeeded in recovering his presence of mind, and selected the only means of safety which was possible. He saved all the children, by taking them from under the feet of the combatants, and putting them through the windows into a garden. For more than two minutes, most of the scholars were prostrated and trodden on by the bulls; yet they escaped with no injury but bruises.

The school room, after the bulls left it, exhibited marks of entire devastation, the windows broken, as well as the benches and tables, the teacher's desk, and every thing in it forming one heap of ruins. Every one does justice to the devotedness, courage and presence of mind of the teacher. If he had become bewildered and left his charge, many would doubtless have been killed or crippled.—These boys will probably long remember the difference between a B and a bull's foot.—*Paris paper.*

Plain Corn Bread.—Six pints meal, one table spoonful of salt, four pints water, thoroughly mixed with the hand, and baked in oblong rolls, about two inches thick; use as much dough for each roll as can be conveniently shaped in the hand. Many use hot water, which in winter, is certainly best. The bread is better to be made half an hour or more, before it is baked; the oven must be tolerably hot when the dough is put in. All kinds of corn bread require a hotter oven, and to be baked quicker than flour.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Twelfth Month, 1842.

It is announced in the last number of the Farmers' Register, published at Petersburg, Va., that at the close of the present year, it will pass into the hands
Thomas S. Pleasants, Esq., who we have reason
believe, is well qualified to sustain the high charac
which it has long, and deservedly maintained un
the supervision of the present Editor. Ten of the
years of his life, have been industriously and laborio
ly given to the Register, by our friend, Edmund
fin, and we shall part with him from the edito
corps, with sincere regret. He will, we trust, howe
carry into private life, the satisfaction of believ
that the effects of his labours, will remain to his co
try, long after himself shall have gone the way of
the earth. A distinguished Senator of Virginia
lately assigned to the "Essay on calcareous manur
a high place among the "Agricultural classics" of
language, and has publicly declared, that under
awakening influence of the able writings, and exp
mental demonstrations of Edmund Ruffin, "lower
ginia is now undergoing one of the most remarka
transformations of this age of improvement." Te
monials of this nature should not fail to prove a so
in the midst of whatever of disappointment, may n
gle in our course, and encourage us to still further
bor in a good cause. To our friend, T. S. Pleasa
we tender a hearty welcome into the Editorial ch
and ask leave to express a hope, he may find it easy
well as profitable.

Through the courtesy of Hon. Wm. C. Rives, Pr
dent of the Agricultural Society of Albemarle,
we have been furnished with a copy of his "Add
at their annual Fair, on the 29th of Oct., 1842."

There must be something particularly cheering,
calculated to incite to every possible exertion, in
reflections of the man who is conscious that him
now occupies the position, which such men as Ja
Madison and Gov. Barbour have occupied before
Men, "who have held the scale of empire," and se
their country in "its highest, and most difficult
tions," and have afterwards given the evening of t
days to the noble task of elevating their country's
riculture, cannot fail to have left behind them, ex
ples which it may well become the ambition of t
successors, to follow. With the ability to place s
men, at its head, we have a right to expect the Soc
of Albemarle will not be behind the foremost in
vancing those great interests, which it has associ
to promote.

The wholesome influence of this Society is obv
in the general improvement of the county. Insta
are given of farms over which the wand of the m
cian has passed, and so changed their ruinous, exha
ed and delapidated condition, that a person who
knew them five and twenty years ago, would not
recognize them as the same places, except by their
changed geographical position. "No man," it is ju
observed, "should be content simply to preserve
lands in the condition in which they are. The
should be made rich, and the rich, richer." The p
dent declares he has always found the best applica
he could make of money derived from land, was to
turn it back again in the shape of improvement.
investment of capital, he thinks, can be more safe,
generally, none more profitable. But then, money
be expended on land, as on every thing else, judici

; adapting manures, as well as crops to particular ils, and always applying them, with so well inform- a judgment, that results may be calculated with eat precision.

The Agricultural establishment of Fellenberg in itzerland, is referred to, in strong terms of approval d admiration. It was visited by W. C. R., and afford- many evidences of the successful training of its pu- s,—of the happy combination of intellectual, and dily labour,—of moral, and physical improvement. he model farm at Hofwyl is instanced as a full refu- tion of the prejudices so frequently indulged, against e idea of a necessity for the farmer to regulate his penditures, and indeed all his operations, by the sug- stions of a comprehensive, and well instructed nd. The light of knowledge is spread abroad, through e whole economy of this farm. It is conducted upon entific principles. That is, such and such manures e applied,—crops raised, and improvements made, cause it is *known*, and *understood*, that there is a mu- al adaptation of the one to the other. The accounts Hofwyl, kept with minute and mercantile exactness, ow, through a series of years, a nett profit of 8½ per nt. upon the whole capital employed. A rate of pro- with which, we would suppose, our practical farm- , even in this land of thrift, ought to be satisfied. he "*passion* of farmers to acquire more land, rather an to make that which they already possess, more pro- ctive," is glanced at, and we are assured that indus- , improvement, and good husbandry are only wanted "develope the natural capabilities of our soil, and make it adequate to every reasonable wish, and en to the fondest dreams of prosperity and wealth." lumella's vine dresser is happily introduced, and ich to the point,—when his eldest daughter was mar- d, he gave her a third of his vineyard for a portion, d yet he had the same quantity of fruit as before. hen the second daughter followed the example of r sister, her father gave her one half of what re- ained, and still the produce of the vineyard was un- minished!

The Washington county Agricultural Society, held Fair, and annual meeting at Salem, N. Y., on the th of 10th month last. We have been kindly fur- shed with the Report of its Committee, by Asa Fitch, ., the recording secretary. Premiums were awarded different individuals who raised 29 bushels of winter heat per acre,—25 and 22 of spring wheat,—80 and of corn,—25 of rye,—97, 80 and 53 of oats, and 510 ushels of potatoes. Eighty-five bushels of the *China ee corn* were grown on an acre, but received no pre- ium, because the grain was shrivelled, and the com- ittee believed it not adapted to their climate, soil and ort summers.

The Report states, that on the 5th of fifth month st, Henry Holmes sowed broad cast, and harrowed , twelve quarts of corn, on little more than half an re, without any manuring, and it was not touched ain, till the 22nd of ninth month, when it was cut, d set up on the ground,—and on the 5th of the next onth, he husked from it 46 bushels of ears. He be- eved the stalks would amply pay the small expense raising it; and thinks the case goes to show the elessness of *hilling* corn.

We have been much gratified, and interested in looking over "The United States Almanac, or complete Ephemeris, for the year 1843; wherein the sun's rising, setting, &c., are given for six different parallels of latitude, embracing the whole extent of the Union; also, a collection of such Tables as are of most frequent use among Engineers, for the determination of latitude, time, &c.; a complete census of the United States, from the official Report just presented to Congress, including the population of every town, county, territory and state, arranged in alphabetical order; the principal officers of the government and the various departments, with their compensation; a view of all the state debts, and the various purposes for which they were contracted; and numerous statistics relative to commerce, manufactures, agriculture, &c. By John Downes, late of the North-eastern boundary survey. Philadelphia, published by E. H. Butler," No. 5 Minor Street, where it is for sale, as well as at this office.

It will be observed that the title page of this work, promises a great variety of miscellaneous matter; and we think they are realized in the text of more than 300 pages. The astronomical Tables are intended to facilitate the operations, which are oftentimes very laborious, of Engineers, and those whose vocations are among the stars. The complete details of the late census,—Balbi's celebrated Population Table of the world, and the great amount of information in relation to the government, commerce, manufactures, agriculture, debts, resources, &c., &c., of the United States, render it a volume particularly valuable to every citizen who, at a glance, would be willing to see his country as it is.

Our friend Solon Robinson, in a letter to the Secretary of the LAPORTE COUNTY AGRICULTURAL SOCIETY, dated September 30th, offers "a beautiful Berkshire pig," for the "best tow frock,"—the uniform of the farmer—that shall be produced at the Fair: promising to wear it, not only at the Fair of that Society, but also at that of the UNION AGRICULTURAL SOCIETY of Illinois. He also says in a letter to the Laporte Whig, that the question is settled, that good peaches can be raised in Northern Indiana—and would state his "manner of preparing the ground and setting the trees, but what is the use? Who'll follow good advice when he can have a way of his own?"

AGRICULTURAL IMPLEMENTS.—D. O. Prouty offers for sale, at reduced prices, a general assortment of Farming Implements, among which may be found corn shellers, from 7 to $18 each;—fan mills, from 12 to $18 each;—straw cutters, from 5 to $30 each;—corn crackers;—sausage stuffers;—milk pails, with strainers;—churns;—cheese presses;—centre draught and subsoil ploughs, &c., &c.

D. O. PROUTY,
No. 176 Market, between 5th & 6th streets, Philad.

LIPMAN'S Diary for 1843, for sale at KIMBER & SHARPLESS', is a very convenient little pocket volume, with blank spaces for every day in the year, in which such entries may be made as are desirable. It is particularly adapted to the use of private families, or persons in business.

Burden's Improved Patent Horse-shoes.—These shoes are made from the best refined iron, and are offered at the low rate of from 25 to 50 cents per set, of four shoes; thus saving the smith much labour and a clear profit of 25 to 50 cents on every horse he shoes, over those who continue to manufacture on the old plan, besides giving greater satisfaction to the customers.

Also, steel toe caulks; cut to fit the shoe, with two prongs, a superior article. For sale by

A. M. & B. W. Jones,
17 south wharves.

Philadelphia, Dec. 15th, 1842.

We found upon our table, on the 7th inst., a communication in reply to an article in our last number. In looking over it, we discovered language, which we seriously believe the writer, be he who he may, would himself regret to see in the columns of this paper. Free discussion we would not discourage; but we have a right to insist that it be conducted with courtesy and good feeling. While the present proprietor has the control of its pages, he must ask to be excused from suffering the Cabinet to be made a vehicle for expressions calculated to irritate, rather than to convince, and which had far better be expunged from the intercourse of gentlemen. If we have inadvertently inserted any thing we ought not, we regret it. While we mean ourselves, to keep in a good humour with all our correspondents, we also mean, if possible, to keep them in a good humour with each other.

☞ Notices, which are essentially advertisements, are sometimes received, with a request that we would insert them. Although the Cabinet is not professedly an advertising paper, the proprietor would be willing to deviate a little from the plan which has heretofore been pursued, and insert to a very limited extent, short advertisements, the subject matter of which, may be in character with this paper. The terms will be one dollar for each insertion of ten lines or less, and so in proportion for each additional line. The money to be paid in advance. An advantageous medium will thus, we think, be opened for our agricultural friends to make their wants known, as well as to have them supplied.

S. C. Ford, of this city, left with us a few we
ago, a very fine sugar beet, weighing, as he says, al
13 pounds. It was grown at his place, at the corne
Second street and Fisher's Lane; the same spot,
understand, where John Lorain made the experim
described in his work on Agriculture. S. C. Ford
stated, that on a piece of ground 41 yards by 26
raised 260 bushels of these beets: or at the rat
1180 bushels per acre. This, at 60 lbs. the bushe
equivalent to 35 tons of green food, which can ha
fail to be of great value, as a change for stock.

The quantity of rain and melted snow which
in the Eleventh month, (November) 1842, was ne
three inches and a half. .... 3.487 inc

Pennsylvania Hospital, Twelfth mo. 1st, 1842.

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Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

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From the Steam-Press of the late Proprietors and Publishers.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

Vol. VII.—No. 6.] **1st mo. (January) 15th, 1843.** **[Whole No. 96.**

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Edited by the Proprietor and James Pedder.

Price one dollar per year.—For conditions see last page.

Sketch of Robert Bakewell Esq.

The man who is the benefactor of the human race, has a right to expect to live in the memory of posterity. Mr. Bakewell will do so, and although this tribute to his worth comes somewhat late, it will, at least, be appreciated as an offering at the shrine of honest merit.

Robert Bakewell was born at Dishley Grange, in Leicestershire, in 1726. The farm of Dishley Grange had long been in the possession of his ancestors, and those from whom he more immediately descended, held the property on a lease of ninety-nine years, from the family of Phillipps, of Garrendon; it having been purchased in 1693 by a Sir Ambrose Phillipps, by whom it was leased to the forefathers of Mr. Bakewell. The term of the lease expired very shortly before Mr. Bakewell's decease; and the farm, which consists of about 457 acres, then came into the occupation of his nephew, Mr. Honeybourne, who resided upon it until he died, which was about twenty years after the demise of his uncle. But with Mr. Bakewell, Dishley lost all its importance, and his successor failed in becoming even a shadow of the great practical man who had been its previous proprietor.

Perhaps, during the last century, no man did so much towards increasing the agricultural interests of the country as Mr. Bakewell. He was unwearied in his exertions, and enthusiastic in bringing to perfection his favourite pursuits. In every branch of the science he was persevering to the end, and by strenuous exertions made himself master of the different modes of cultivation pursued not only by the English farmers, but also those of foreign cultivators. He did not content himself with the mere knowledge which he had thus laboriously and industriously obtained, but he introduced that system into his own farming practice which is now generally pursued in Leicestershire. But the great glory which is attached to the name of Robert Bakewell, is in the vast improvements which he made in the breed of cattle. The different nations of Europe supplied him with the material, and nature herself might have wondered at the skill which he displayed in bringing her works to a greater degree of perfection. It was from Flanders that he principally procured his famous breed of black cart horses, now nearly if not quite extinct, which have been thus described. They were lighter-legged and flatter-boned than those now in use, but of great strength, more especially in their forequarters, with erect heads and high crested. One of this breed was of such excessive beauty of proportions, that he was likened to the fancied war-horse of the German painters. He must indeed have been a splendid and picturesque animal, for a man of moderate height seemed to shrink under his fore-end, which rose so perfectly upright, that his ears stood, (a qualification that Mr. Bakewell deemed indispensable to the beauty of the horse,) perpendicularly over his fore feet. This animal was the entire horse which Mr. Bakewell christened K., and which was perhaps one of the most elegant creatures of his class that was ever bred within the British dominions.

Mr. Bakewell had too much good sense to keep useless stock; he made even his mares work in the team, but they were treated as gently as a man would treat his wife, and the use of the whip was entirely prohibited at Dishley. It is somewhat unfortunate that this fine breed should have been superseded by a heavy-legged race, whose movements are snail-paced, and decidedly inferior for agricultural purposes. Is there no one among our friends who would devote his attention to this important subject?

The pride of Mr. Bakewell was to improve the class of domestic animals, and his celebrity as a breeder of long-horned cattle will ever shed a halo over his name. It appears he selected the finest individuals of the Warwickshire species, principally from the herds of Mr. Webster, near Coventry, and Mr. Fowler, of Rolwright, which, being crossed with the most excellent of the Lancashire breed, produced a stock of cattle that was held in the highest estimation for a considerable time; but fashion varies even with respect to animals, though the Dishley breed was kept up for some years after the death of Mr. Bakewell, by Mr. Paget, of Ibstock, Mr. Astley, of Addeston, and to a more recent period, by Mr. Huskisson, of South Croxton; though when a sale of the latter gentleman's stock took place, about thirty years after that of Mr. Paget's, there was a great depreciation in the intrinsic value of the cattle, although they were allowed to be some of the best and purest specimens of the Dishley herd.

At this sale the famous bull, Shakspeare, which was bred by Mr. Fowler, by Shakspeare, *pere*, out of Young Nell, fetched 400 guineas, to which the seller appended the condition that he should have the privilege of having the use of him for two cows yearly. The heifers by this animal also sold well, one two years old realized 84 guineas, and another, one year older, 70 guineas. Mr. Bakewell preferred rearing small-boned cattle, and considered them to be in every way the most profitable, both to the farmer and the consumer. He also strongly recommended great attention being paid to the quality of the cows intended for breeders, and justly remarked that, when a sound discretion was not used, the produce often failed, and then the bull was frequently unjustly blamed. He was exceedingly particular in his own selections, and he prized his favourite bull, called Twopenny, so highly, that he refused £200 for him; and he appears to have been somewhat choice of his produce, for he rarely sold any of them, though he let them at high prices for the season.*

Celebrated and excellent as Mr. Bakewell's breeds of horses and cattle were, still more so was his breed of sheep. Perhaps at no period of time, certainly not in his, was such an improvement made in this valuable animal. In the present day cultivators of flowers are continually producing new species, but Mr. Bakewell was beforehand with them, for he may truly be said to have been the producer of a new variety of sheep. Combined efforts frequently produce great improvements; for practical men, by condensing their energies into one focus, may brin forward important results. But Mr. Bak well's was a master mind; his own skill ar genius overcame obstacles that to others a peared to be insurmountable; and his lon woolled sheep became the pride of Leiceste shire. It was entirely his own work, ar the time he took to complete his wonderf improvement was incredibly short. In ou day the Southdowns have been brought the highest state of perfection by Ellma Grantham, Webb, the Duke of Richmon and others, the superiority of whose floc do honour to the agricultural interests of th country; but they were brought to this sta of perfection by the union of several partie Mr. Bakewell stood alone, and to him we a solely indebted for that beautiful and usef animal, the new Leicester sheep.

It was not on a suddden that Mr. Bak well attained his high celebrity as a shee breeder. It is recorded of him that the fir ram he led out, he drove himself to Leice ter fair, and obtained only 16s. for the u of him for the season. About 1760, his ran did not sell for more than from two to thr guineas each, and after this time he did n receive for their hire more than from 15s. a guinea per head. He now gradually a vanced his terms, and in 1770 he let some them for 25 guineas. Mr. Bakewell used tell an anecdote respecting the difference judgment in respect to the value of cattl He was once attending Loughborough Tu market, where he had a ram which he ha let for 25 guineas. Soon after the agreeme was concluded, another farmer offered to pu chase the animal, and Mr. Bakewell jestin ly fixed the price at 25s. The farmer co sidered this too much, and offered 18s., ar eventually they parted for 2s. This w something on a par with the judgment some Leicestershire farmers respecting heifer which had been purchased for 80 gu neas, and which they a few days after pric at £8. This may be considered the fir dawning of his fame and fortune. The r putation and prices of his stock so rapid increased, that in a very short time 400 gu neas were given for the use of a ram for th season. One, called the Two-pounder, pr duced him in one season 800 guineas, besid the produce of his own ewes that were put him, so it may be fairly calculated that th profits of the produce averaged him 1,2 guineas for one season.

The ardent mind of Mr. Bakewell wa brought into action about the middle of th last century, and from that time we ma date the improvement of the Leicester shee About that period he engaged John Breed for his head shepherd, and it appears that soon became his confidant. There is little doubt that he entered actively into his master's plans, for he had the entire control over the formation of the new breed, under the direction of Mr. Bakewell, but they kept the manner in which it was accomplished a profound secret.* This seems somewhat strange, as Mr. Bakewell was a liberal-minded man, and in after years, the knowledge of his process might have been of essential service to his country. But his whole mind was devoted to the science in which he had engaged, and while he was practically working out his plans, it is probable that if any of his schemes proved failures, he wished them to be kept as secret as possible. In this he acted wisely, for too frequently the observations of "good natured friends," tend to damp the spirit, and check the energies of a man who risks his reputation on the success of his experiments. Hence it is, that we are so little acquainted with the crosses he used to form in his beautiful flock. Conjectures have been various: some have considered that the principal crosses he made, were between the old long-wooled Leicesters, and the ill-formed animal that in those days fed upon the grassy hills of Chorwood forest; but, after all, conjecture is not proof. It may be taken as a fact denying dispute, that all his crosses were made from the best individuals of the different flocks, and these he in all probability, crossed again with some of another breed. His great object was to gain the greatest weight of meat upon the smallest quantity of bone, and to combine this with symmetry of form, early maturity, fine quality of flesh, and a propensity to fatten. Some breeders consider the size of the animal to be too small, but Mr. Bakewell's opinion was, that a greater quantity of mutton would be procured from a given quantity of acres, grazed by a larger number of small sheep, than from a smaller quantity of larger animals possessing less appetite.

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* Mr. Bakewell had, at Dishley farm, several carcasses of the different breeds preserved whole in pickle, which distinctly showed the thickness of the flesh and fat, and also the smallness of the offal. He had likewise skeletons, with distinct portions of the bones heads, ribs, &c., of the animals.

Arthur Young, who is no mean authority, informs us that Mr. Bakewell was very curious in the breed of his sheep, and he considered both his rams and his ewes to be perfect specimens. He describes their appearance thus:—"Their bodies are as true barrels as could be seen; round, broad backs, and the legs not above six inches long; and a most unusual proof of kindly fattening, is their feeling quite fat just within their fore-legs on the ribs, a point in which sheep are never examined in common, from common breeds never carrying any fat there. In his breed of sheep he proceeds exactly on the same principle as with oxen, the fattening in the valuable parts of the body, and the living on much poorer food than other sorts. He has found from various experience in many parts of the kingdom, as well as upon his own farm, that no land is too bad for a good breed of cattle and particularly sheep. It may not be proper for large stock, that is, large-boned stock, but undoubtedly more proper for a valuable well-made sheep, than the usual wretched sorts found in most parts of England on poor soils, such as the Moor sheep, the Welch ones, and the Norfolks; and he would hazard a moderate stake that his own breed, each sheep of which is worth several of those poor sorts, would do better on those poor soils than the stock generally found on them; a good and true shape having been found the strongest indication of hardiness."

According to Mr. Young, the breed of the sheep was originally Lincolnshire, which was wonderfully improved by Mr. Bakewell; and another person, who visited Dishley in 1790, informs us that he was likely to make by his tups that season, fully to the amount of 3000 guineas. But notwithstanding the large amount of money that Mr. Bakewell was in the habit of receiving from the proceeds of his stock, at the very noontide of his fame he became involved in great pecuniary difficulties, which would not appear to have been brought on entirely by the expenses he bestowed on the necessary experiments for perfecting the improvements of his flock, but from the large number of visitors that congregated together at Dishley. Several of the principal of our nobility were frequently his guests, and Mr. Bakewell, whose disposition was as liberal as his mind was noble, entertained them in the same expensive style as they were accustomed to live in themselves, when at home. This of course increased the expenses of his establishment enormously, and the host of Dishley Grange might truly have told some of his guests, as the Lady Rendlesham once remarked to the last Duke of York, when he took his leave, that Rendlesham House was considered to be the best inn on the road. It was also an unfavourable period for making money by the cultivation of land; the war with America had considerably reduced the value of produce, and the article of wool, which was of the utmost importance to him, was so greatly depreciated, that it was sold as low as nine shillings per ton. All other articles being also proportionably reduced, his expenses great, and his hospitality unlimited, it cannot be wondered that he found himself in difficulties. But even then, Bakewell kept up his high position, for when his stock was valued, (the unexpired term of his lease being included in the valuation,) there was a balance in his favor, of from £1,500 to £2,000.

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* Probably the invariable custom of Mr. Bakewell, not to engage his servants for a term of less than four years might have contributed to prevent the secrets of his system being known. The well-used servant naturally becomes attached to his master, and the honest one will never betray the confidence that has been reposed in him.

As a practical farmer, Mr. Bakewell attained great celebrity. He was in advance of the age, and we may say full half a century before any of his neighbours. It may be questioned if the land in Leicestershire is even now so well cultivated, as Dishley farm was when its possessor died. He adopted the system of irrigation, and turned a small rivulet that flowed along a portion of his farm to such good account, that from it he contrived to water from 60 to 80 acres of meadow land every season. He turned this little brook also to other useful purposes, making it to feed a mill, and save the trouble and expense of carting his turnips, which being thrown into the stream, were allowed to float down with the current to the barn end, where their further progress was impeded by a grating at the bottom of a reservoir, from which they were taken out and laid up clean and freight free, for the winter's supply. The idea was beautifully simple and eminently useful, but Mr. Bakewell possessed a mind that was continually devoted to the improvement of rural affairs. He pursued the drill system of Tull, never sowing broadcast; both grain and turnips he always sowed by the drill, and kept the ground clean by the horse-hoe. There was a striking contrast also in his system of ploughing and that of his neighbours. Some of them employed from four to seven horses at the plough on a sandy loam soil, and then did not turn up much more than half an acre per day. Mr. Bakewell invariably confined himself to a pair, and stirred up an acre with ease, thus quadrupling the quantity of work done with an equal portion of strength. Dishley, in fact, was a school of practical agricultural reform, and it appears rather wonderful that the system was not generally adopted by the Leicestershire farmers. It is not now unusual in that county to see a string of four or five horses attached to the plough. For a long time the drill system also met with considerable opposition, but within some few years it has been looked upon in a more favourable light. Cultivators naturally look to the amount of profits that are likely to arise from the practice of any separate system; that of Mr. Bakewell did not place him among the wealthy, but had he been less liberal in his ideas, less given to hospitality, less visited by the patrician portion of the community, who entailed enormous expenses upon him, he must have lived and died a rich man, whether it was his desire to do so or not. It does not follow that a system must be erroneous, because it does not at once open a mine of gold to fill the pockets of the inventor. Every system must have time to work, and every effort at improvement deserves, and ought to receive, the strictest attention. A practical agriculturist is of far more value to a nation than even a practical manufacturer, for the benefits the one confers upon the human race are lasting, the other but transient; yet both deserve to be honoured by their country.

Dishley Grange was not exactly what a fashionble auctioneer would "term one of nature's most favoured spots," but under the care of Mr. Bakewell it became more noted for its usefulness than its beauty. Clumps of willows were planted for ornament and shelter, which were carefully cut every seven years, and the wood thus supplied, was brought into use to make handles for rakes, and other purposes of husbandry, manifestly causing a great saving of expense. Even the peelings of the willows were not thrown away, but by the direction of the master-hand, were applied to make the bottoms of the sacks. Swampy as the grounds adjoining the house were, Mr. Bakewell contrived to make even their barrenness available.

The gardens were cultivated rather for utility than for show; the fish-ponds were always kept well stored, and even the drainings from the yard were conveyed to the brook, and thus mixed with the water, used for the purpose of at once irrigating and manuring certain fields belonging to the farm.

It ought to have been remarked that the liberality and high-mindedness of Mr. Bakewell never evinced itself more fully than in his incessant application to the improvement of the Dishley estate. He was but a tenant, but he yearly increased the value of the land he rented, for the benefit of the landlord. He stood forth as a model for all practical farmers to study; an example for all honest tenants to follow. He was indeed a man of rare merit, and it would perhaps be difficult to find his fellow. But, like almost all men who have benefited and enriched their country, and increased tenfold the wisdom of posterity, by the most important discoveries in arts, sciences, and agriculture, Bakewell has been allowed to rest without even a monument to his memory. He devoted his energies to the good of the public; his own immediate interests he disregarded, without once thinking that future ages would have cause to pay the greatest veneration to his memory. He may be said to have been the first agricultural patriot; for the man who endeavours by incessant exertions to improve the animal creation, is fully as deserving of that distinctive appellation, as is the statesman whose exertions are employed for the perpetuation of the rights and privileges, of his fellow-countrymen.

We are proud of being able to pay this slight tribute of respect to the memory of a great and amiable man, who, by his genius has created and scattered over the green hills and verdant meadows of his native land, an animal whose beauty and usefulness will ever be a living monument to record his name. To him the English agriculturists owe an imperishable debt of gratitude; and we will conclude with a quotation from Arthur Young, who says: "Let me exhort the farmers of this kingdom to take Mr. Bakewell as a pattern in many points of great importance; they will find their account in it, and the kingdom in general be benefited not a little."

Mr. Bakewell died October 1st, 1795.

London Farmers' Mag.

For the Farmers' Cabinet.

Farms on Leases.

Nothing appears more rational, than the views that have been taken in the Cabinet, of the English system of Leasing; at the same time, I suppose it must be admitted, that the difference between the situation and circumstances of this country and Europe, precludes the adoption of much that has proved of the most essential importance, in a land where the mode of cultivation, appears to have reached a sort of ultimatum, created and fostered by the mutual security, afforded by it, to both landlord and tenant. In a late conversation on this interesting subject, with a fellow subscriber,—one who has lands which he lets, either on shares or money rent,—I read to him, from a late number of the Quarterly Journal of Agriculture, some observations, which have gone far to satisfy us, that the idea, of engrafting upon our mode of letting, a portion of a system that has worked so well, and produced such unequivocal marks of good understanding and excellent management in the old country, is not so preposterous as we at first imagined. True, there are tenants who would not be willing to bind themselves for life, or twenty years, to the cultivation of another man's land; and there are landlords, who could not, and would not be willing to put their lands, for so long a period, out of their immediate possession; but there are many of both, who would be ready to enter into such an arrangement, could it be made plain that such would be to their mutual advantage,—an easy task, it now appears, both to my friend and myself, and affording the most pleasing prospect of future and ultimate gain to landlord and tenant.

To those who have not studied the subject, the thing will be apt to be considered difficult of application; but it would, in reality, be unattended by any thing but good; and the rules for guidance, laid down in the work above mentioned, are so plain and satisfactory, that nothing of the kind would be experienced. Allow me to transcribe from its pages, a few passages that will, I conceive, be of considerable interest to your readers.

"One objection, which I anticipate to the extensive letting of farms on lease is, that it would render the farmer too independent. Now, that it would injure the fair and legitimate influence which the land-owner ought to have over the cultivator of the soil, I deny. The source of a land-owner's legitimate influence, consists, not in his power to do *evil*, but in his ability to do good: indeed, the connection between landlord and tenant is too intimate; their interests are too much alike, and the value of a good understanding at all times too apparent, to cause any diminution of the landlord's *proper* influence, or any abuse of the tenant's temporary power under the lease system. And that the tenant's temporary power or independence would lead him to neglect his farm, is equally unlikely; his own interest being guaranty that he would not injure his land by improper management during the earlier years of his lease, while an effective covenant or stipulation would guard the latter years. Thus, if we let a farm for twenty years, allow the tenant to manage as he thinks best, for sixteen years,—a few injurious crops or injudicious rotation excepted,—but compel him by a precautionary clause in his lease, to pursue a certain course of cropping and tillage for the last four years: upon this plan, if the tenant's system be judicious, he might have his lease renewed at the expiration of the sixteen years, when he would again be at liberty to pursue his own course, and the compulsory clause would never come into operation. In every lease, however, as few astringent covenants as possible should be introduced,—they merely retard and annoy the good farmer, and rarely improve the unskilful. We all know, and freely admit, that a *tradesman* should be left perfectly free in his operations and the management of his affairs, and can easily perceive how injurious it would be to his interests, for the owner of his house to compel him to a purchase or a sale, or the peculiar management of any part of his business,—every fetter, therefore, which at all interferes with the *farmer's* search after the latent treasures of the earth, injures his success.

"When a tenant takes a farm on lease, he ought to value the gross product of the same, not at what it will produce by superior management, but at what it has produced in its present condition; if he can, by superior skill, make it produce one fourth more, his lease insures him the benefit of it, and encourages him to continue his improvements; and when a depreciation of prices takes place, if his produce does not fetch as much as formerly, he finds that he has more in quantity; so that the aggregate value shows in his favour; but should brisk markets come, he has both good prices and an increased quantity of produce. On a lease of twenty years the tenant is left at liberty to manage as he thinks best, so as to give full scope to his skill, industry and capital; and the result will be seen, in the more judicious system of arrangement in regard to rotation, draining, &c. The evidence of Mr. R. Hope, a tenant on lease, shows this expressly; for he says, he farms 650 acres of land; he has deep-drained the whole of it; has limed the whole farm at an expense of $50 per acre,—total cost, 32,500 dollars!—and furrow-drained to the amount of $1200 during the last two years. But this would never have been done, if he had had no lease; and the evidence of every other agriculturist is corroboratory; all showing great improvements, and all ascribing them to the protection afforded by leases."

And what disadvantage would accrue, were a land-owner to rent his estate on a lease of 14 or 20 years to a responsible tenant,—one who, by his good management would be adding yearly to its intrinsic value? In the rental of a *house* even, is it deemed injurious to the owner's interests, or detrimental to the sale of it, that it is rented on lease for a fixed sum, to a tenant who is punctual in the payment; who keeps it in repair and is continually improving it by judicious additions to its conveniences? It is true, there might be an individual who would be desirous to purchase, with a view to a residence; but there would be, in all probability, ten others, ready to give its full value, as a safe investment of capital, rather than purchase elsewhere, with the chance of the premises lying for a season unoccupied and going to decay; with the fear of the tenant's clandestine removal before rent-day, or rent-pay,—the *danger* of which is so well known, and the *reality* so often experienced. But in the case of a *farm*, the land is continually and materially improving in value by being tenanted, and let to a responsible person on a lease, sufficiently long to justify an outlay of ingenuity or capital, in the purchase of lime and manures of different kinds, the expensive but profitable process of under-draining, clearing, planting and pruning; all which, as we have seen above, would willingly be undertaken by a tenant who has the security of a lease to proceed upon. Now, two things are certain,—no man ever yet did the *honest* thing by a farm, that is rented from year to year, and no land ever could do the *generous* thing by a yearly tenant. What say our land-owners,—are they willing to put the question fairly to issue?

One question more, and I have done. I have now in *one* eye, a farm of 45 acres of land that has been let upon shares until it is as poor as death, the owner all the while complaining, that he has never been able to meet with an honest tenant,—one who would do the land justice. In the *other*, a man who is possessed of every requisite to raise the farm to the highest pitch of improvement, except a capital to stock it and carry it on. Now, what objection could be made to the proposal, that the land-lord should stock the farm and let it on a lease of 14 or 20 years to this man, at the sum for rent that he has received on an average of the last seven years, or if you please, a little more? He would hold, as his own, the stock for security, and charge interest for the same; as also, an additional per centage on the sum so expended, to cover possible contingencies, but guarantying to the tenant the use of the stock, until he is able to redeem it at a price agreed upon. Will it be thought that the tenant would derive too great an advantage from such an arrangement? I conceive not, if it be remembered that to his labour and ingenuity the estate is to owe all its improvement, and not to the landlord's money-capital, as, for the use of that, he will have to pay interest. But I seem to hear some one exclaim, "who would be willing to take all this *trouble?*" I answer, would to heaven that I had been favoured by Providence with the *means*, I would soon find the way to accomplish the *end*, and consider it a *pleasure*. In my next, I will endeavour to cast up the quantum of good that might be accomplished in this way, by showing how small a sum of money would be sufficient to settle a man for 20 years as an integral part of the soil, and the paradisaic effects that would be sure to emanate from such a pure source of enjoyment.

Vir.

27th Dec., 1842.

The Swallow.

So little was known of the emigration of the swallow fifty years ago, that Dr. Johnson in one of his conversations with Boswell, makes the following observation; 'Swallows certainly sleep all the winter. A number of them *conglobulate* together, by flying round and round, and then all in a heap throw themselves under water, and lie in the bed of a river.' This idea is still prevalent amongst many persons who reside on the banks of the Thames. They see swallows settling and roosting by hundreds and thousands on the willows growing on the aytes of the river, which are bent down to the edge of the water by the weight of the birds, and the next day, perhaps, not one is to be seen. It is therefore concluded, that they have immersed themselves.

It is an interesting sight to watch the young chimney swallows after they have quitted their nest, sitting quietly on the top of a chimney and receiving, one after another, the food brought to them by the parent bird. During the period of incubation, the male shows the greatest affection for, and attention to, his mate, and serenades her from the chimney top as soon as the first gleam of light appears.

Kalm, in his travels in America, tells a pretty anecdote of the swallow, which, he says, was related to him by a lady of great respectability, who was a witness of the fact.

'A couple of swallows built their nest in a stable belonging to the lady in question, and the female laid eggs in the nest, and was about to sit upon them. Some days after, the male was seen flying about the nest, sometimes sitting on a nail near it, and uttering a very plaintive note, which betrayed his uneasiness. On a nearer examination, the female was found dead in the nest, from which she was removed, and her body was thrown away. The male then went to sit upon the eggs, but after being about two hours on them, and perhaps finding the business too troublesome, he went out and returned in the afternoon with another female, who sat upon the nest, and afterwards fed the young ones, till they were able to provide for themselves.'

I have frequently noticed how apt swallows are to settle on the ground, in a row, or perfect line. I have no doubt many persons must have observed this, while they have been walking near the Serpentine River in Hyde Park, during a fine autumnal day. The birds, after hawking for flies upon the surface of the water, will at once settle on the path which extends across the head of the river, in so perfect a line, that one looks at it with astonishment as the simultaneous act of the birds. Their flight is equally sudden and regular on the approach of an intruder. I have also noticed this regularity of line in young birds, while waiting for food from their parents.

I observed a curious departure from the usual mode of building, in the martin during this summer. The circumstance occurred at the Virginia Water, in Windsor Great Park. Near the fishing temple on that beautiful lake, there is a cottage, part of which is covered with a *trellis*, against which a pair of swallows had endeavoured to build their clayey nest, the spot they had chosen being protected from the weather by the large and projecting wooden eaves of the cottage. Whether they found any difficulty in fixing the earth for their nest, in the peculiar spot they had selected, or from some other cause, the vacancy only between the wall and the trellis was filled up with a small deposit of clay, but the nest itself was built of grass and straw, and was fixed alike in the trellis and the deposit of clay. Here I saw the swallow sitting on her eggs, the depth of the nest being very inconsiderable.

Before I conclude this notice of these interesting 'guests of summer,' I would plead in their behalf, for the purpose of endeavouring to put a stop to the cruel custom of wantonly shooting at them. Independent of the cruelty of starving whole nests of young ones by killing the old birds, they may be scared from a neighbourhood by being frequently disturbed; and then comes a redundancy of insects, producing blight, mildew, and other disorders on our corn and plants. We are also deprived of their hilarity, their thousand meanderings in the air, their pretty twitterings, and all the agreeable associations which their presence gives rise to. The swallow-shooter is, moreover, guilty of a breach of hospitality, by destroying a bird which has voluntarily placed itself under his protection, and which has always been considered as a privileged guest.

> 'The swallow, privileged above the rest
> Of all the birds as man's familiar guest,
> Pursues the sun, in summer brisk and bold,
> And wisely shuns the persecuting cold:
> When frowning skies begin to change their cheer,
> And time turns up the wrong side of the year,
> It seeks a better heav'n and warmer climes.'
>
> Dryden.

Since writing the above, I have had another opportunity of witnessing a peculiarity in the habits of the swallow. Residing near the River Thames, and having a window opening close to its banks, I frequently amuse myself with watching the vast congregations of them as they skim along the surface of the water. But a few moments since, I heard a swallow, apparently at some height in the air, utter two shrill notes; on hearing which I observed the whole of the flock quit the water, and rise into the air, so as almost to disappear from the sight. After a short time they returned to hawk for flies, and dip their bodies on the surface of the river at the place they had just before quitted. If the notes were not intended as a warning of approaching danger, I could almost fancy that it was a call for them to partake of a banquet of insects which had suddenly made their appearance elsewhere.

On mentioning this circumstance to an observant friend, with whom I have had many very agreeable conversations on Natural History, he informed me that when he was lately at Malvern, he had an opportunity of observing the effect which the two notes I have just described, had on a large assemblage of swallows. They had congregated in great numbers on the roof of a house at that place. The preceding evening had been cold and somewhat frosty, so that early in the morning the swallows were so torpid that he caught two or three of them in his hand, as they rested on the roof near the window of the room in which he slept. While they were in this state he heard two shrill notes from a swallow, and in an instant the whole of them took wing simultaneously, and having made two or three circuits in the air, disappeared altogether. He fancied that these circuits were preparatory to their migration, but they were more probably a notice that food was at hand. At all events it seems clear to me that there is a master or leading swallow, who guides the movements of the rest while they are as usual, congregating previous to their migration. Having mentioned this circumstance, I trust that it will engage the attention of others, so that further light may be thrown on this curious fact in the economy of the swallow.

Jesse's Gleanings.

Oil of Indian Corn.—This oil is obtained in the course of the process of making whiskey. It rises in the mash-tubs, and is found in the scum at the surface, being separated either by the fermentation or the action of heat. It is then skimmed off, and put away in a cask to deposit its impurities; after which it is drawn off in a pure state, fit for immediate use. The oil is limpid, has a slight tinge of the yellow color of the corn, and is inoffensive to the taste and smell. It is not a drying oil, and therefore cannot be used for paint, but burns freely in lamps, and is useful for oiling machinery.—*Silliman's Journal of Science and Arts.*

For the Farmers' Cabinet.

Magnesia.

I pray you, Messrs. Editors, give me space for a very short extract from a paper lately read by Professor Johnston, before the Highland and Agricultural Society of Scotland, "On the improvement of oats growing on moss," as I conceive, it will be found interesting to your readers, during the present exciting controversy which is being carried on through the pages of the Cabinet. The Professor says,—

"It is well known to practical agriculturists, that oats grown on reclaimed peat or moss lands, are apt to produce much straw, but to yield an ear which is poor and badly filled; the straw also being soft and void of that hard shining surface, by which ripe oat-straw, grown upon sound land, is generally distinguished. The conclusion we naturally draw, from a knowledge of the effect of an application of clay to these peaty soils, is, that the defect consists not in their *containing* any noxious ingredients, but in their *want* of something necessary to the healthy growth and maturity of the plant; which the clay contains, and is able to supply. The first deficiency in oats grown on moss, of which I was made aware was, that the ear did not fill,—in such a soil, the acknowledged deficiency is in mineral matter, and I therefore considered it likely that the plant found it difficult to procure the mineral substances which are always present in a full and healthy ear. These are chiefly the phosphates of lime and *magnesia*, and I consequently recommended a trial of bone-dust mixed with certain other substances, which might yield also a further supply of nitrogen, which is known to be necessary to the production of the seeds of nearly all plants. This mixture contained no magnesia, *to supply which, however, it was not improbable that the lime, added to the land might suffice;* as very many limestones contain an appreciable admixture of magnesia. These suggestions were carried into effect in a skilful and zealous manner, and the results, in reference to a trial of bones dissolved in sulphuric acid, mixed with a small quantity of nitrate of soda, were thus reported by Mr. Fleming, 'I examined the oats again a few days before they were cut, when I was much satisfied; the straw appeared to me as stiff and shining, and the ears as well filled, as if they had been grown upon stiff loam; and I consider the same dressing applied to grain crops upon moss, will insure a good crop of well-filled oats.' So far as a trial on one locality can be relied upon, therefore, we may consider this result exceedingly satisfactory."

T. Bennet.

THE ANGUS COW.

The origin of the Angus-shire Scotch breed, of polled cattle, is so remote, that no account of their introduction into the country can be obtained from the oldest inhabitant; some of the first qualities which attracted the attention of the improvers of this valuable breed, were their peculiar quietness and docility; the ease with which they were kept, and the few losses which were incurred while confined in their stalls, from this circumstance; as also, the convenience of disposing of a great number of them in the same space of stable room; their natural fitness for stall-feeding, and the rapidity with which they lay on fat. This has brought them into much repute in their own market, as well as in England, whither they are sent in numerous droves, for the supply of Smithfield market, under the denomination of *Galloways.* They are usually fed off at three years old, and reach to an average weight of 840 lbs. The greater part of them are black, or with a few white spots; next, yellow or dun, brindled, and silver yellow. They are a most valuable breed, and have rapidly gained ground on the horned cattle of that part of the country; and when the agriculturist speaks of the Angus breed, he refers to the polled, and not to the horned species.

The preceding cut is the portrait of a heifer, bred and fattened by Mr. Watson; she was exhibited at the Perth show, and obtained the medal for extra stock of superior quality. At the Smithfield Society's show, she also received the medal, in the class of extra stock; and the Highland Society requested that she might be sent there, as a specimen of the excellence to which this breed of cattle could be made to arrive: she was then four years and a half old. She was publicly exhibited for a considerable time before she was slaughtered, and realized a large sum for her owners. She was out of a very small cow, with a remote dash of Guernsey blood, yet retaining all the best features of the pure Angus breed; the bone of her fore-leg, which is still preserved, is not thicker than that of a red deer, and she was exceedingly active to the last. When slaughtered, her breast was not quite eight inches clear of the ground, and her *inside* fat was equal in weight, to a quarter of her whole weight of beef; her dead weight being 1,800 pounds, although it was imagined she had not arrived at her point of extreme weight.

The quantity of milk yielded by this favourite breed of cattle, is various. In the hilly district, from two to three gallons per day; but it is very rich: in the lowlands, they will give five gallons a day; they were once considered about the best breed of dairy cows in Scotland; but since the breed has been more improved, and greater attention has been paid to the fattening qualities, they have fallen off in their character for the pail. Many of these cows are kept for suckling calves; they are selected for this purpose, so as to calve in January or February, when a stranger-calf of the same age is procured, and both are suckled by her until the 1st of May, when they are weaned, and two others are procured; these suck until the 1st of August, and are then weaned, when a single calf is put into the pen and fatted for the butcher, the season being then too late for rearing; when the cow, having suckled *five calves*, is let off her milk.

Barometrical Observations,

Made to ascertain the Level of the Dead Sea.

To Professor Silliman:

Sir,—Thinking the following observations, made to ascertain the level of the Dead Sea, might be interesting to you, I take the liberty to forward the same. They were made by Sir David Wilkie, W. Woodburn, Esq., and myself, in March last, as you will perceive by reference to the dates.

You will be concerned to learn, that the talented gentleman who suggested these observations, (Sir David Wilkie,) recently died near Gibraltar, on his return from a visit to the Holy Land. He had secured a large amount of memoranda at Jerusalem, the Dead Sea, Bethlehem, and other places in Palestine, from which he hoped to create a new, and better order of Scripture painting; in which, had his life been spared, he would undoubtedly have succeeded. But his work is done, and the gifted pencil which has so often made the canvass breathe, is forever laid aside. With sentiments of respect, I remain your obedient and humble servant,

E. R. Beadle.

Aleppo, Aug. 27, 1841.

BAROMETRICAL OBSERVATIONS.

Places.	Barom.	Therm.	Weather.	Time.	Remarks.
Jaffa	29.958	59½	fine.	Mar. 1st.	Level of Mediter.
Jerusalem	27.438	55½	fine.	" 3d.	
St. Saba	29.352	68	threat'ning rain.	" 4th.	
Dead Sea	31.372	68	do. wind N.	" 5th.	Level of Dead Sea.
One half hour above Jericho	30.575	76	rain.	" 5th.	
Two hours further up	29.106	67½	foggy.	" 6th.	
Four and a half hours above Jericho	28.406	70	fine.	" 6th.	
Jerusalem	27.278	64½	high wind.	" 6th.	

Recapitulation, without reference to thermometer:

Jerusalem, higher than the Mediterranean	2520 feet.
St. Saba, " " "	606 "
Dead Sea, lower " "	1414 "
Jericho, " " "	617 "

From "Silliman's Journal of Science and Arts:" for Jan. 1842.

For the Farmers' Cabinet.

Bee-keeping.

Messrs. Editors.—Having some leisure moments on hand, I thought I would furnish a few passing remarks under the head of bee-keeping, for your valuable paper. There are some excellent articles on this subject, in the several volumes of the Cabinet, already, but I conclude that what I may have to say, can do no injury, if it does no good; I wish the matter revived.

Many persons deprive themselves of a great luxury—one of the most delightful "sweets" of life, because they believe the keeping of bees is both troublesome and unprofitable. Bees, however, strengthen the local, and home attachments of their owner, if he will interest himself in their curious operations, and they will yield him into the bargain, with but little cost of time or care, an article of profit as well as of luxury. If we commence keeping bees, with an apprehension that nothing more is necessary, than to provide them with hives in the first place, and to take their honey in the autumn, we shall probably be disappointed. Like the tree we plant, or the flower we would enjoy, they require some nursing. We must guard them as much as possible from their enemies, provide them with pastures of buckwheat, and white clover, occasionally feeding them, when we find that our avarice has deprived them of more of their provender, than they could afford to spare. Many persons are discouraged from keeping bees, by the disinclination they feel to the common practice of killing them in the autumn, when the honey is procured. But let me remind these, that the substitution of Hall's self-protecting hive, or some one of the many other improved kinds now in use, for the old fashioned box, would obviate the necessity for the unpleasant recurrence to the brimstone match. This is easily done by the poor as well as the rich. And every one may have on his table, one of the *sweetest* luxuries of life, furnished by servants who work without price, affording to their attentive owner, as they progress in their operations, ample compensation for all the trouble they give him. Their honey then, is clear gain. Suffer me to close my short article in the language of the old French Bishop, who, when any of his curates applied for an improved living, would only reply, "keep bees—keep bees." Yours, &c.

E. B., Jr.

Union-town, Pa., Nov. 21, 1842.

Exercise.

Many people look upon the necessity man is under of earning his bread by labour, as a curse. But it is evident from the structure of the body, that exercise is not less necessary than food for the preservation of health; those who labour are not only the most healthy, but generally the most happy part of mankind. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant agriculture, every where evidently proves it to be the most healthy, as well as the most useful employment.

The love of activity shows itself very early in man. So strong is the principle, that a healthy youth cannot be restrained from activity. Our love of motion is surely a strong proof of its utility. It seems to be a law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence.

Inactivity never fails to produce a universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed. How can persons who loll all day on easy chairs, and sleep all night on beds of down, fail to be relaxed; nor do those much mend the matter who never hardly stir abroad but in a coach.

Glandular obstructions generally proceed from inactivity. These are the most obstinate maladies. So long as the liver, kidneys and other glands duly perform their functions, health is seldom much impaired, but when they fail it is difficult to be restored.

Weak nerves are also the constant companions of inactivity. We seldom hear the laborious complain of weak nerves. This plainly points out the sources from which nervous diseases generally originate, and the means by which they may be prevented.

It is absolutely impossible to enjoy health, where the perspiration is not duly carried on; but that can never be the case where exercise is neglected. When the matter which ought to be thrown off by perspiration is retained in the body, it vitiates the humours, and occasions the gout, rheumatism, &c.

No piece of indolence injures the health, more than the custom of lying in bed too long in the morning; the morning is undoubtedly the best for exercise, as the air braces and strengthens the nerves. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

Every person should lay themselves under some sort of necessity to take exercise. Indolence, like other vices, when indulged, gains ground, and at length becomes agreeable.—Hence many who were fond of exercise in the early part of life, become quite averse to it afterwards. This is often the case with gouty and hypochondriac persons, and frequently when their diseases are difficult to cure.

Indolence not only occasions diseases, and renders man useless to society, but promotes all manner of vice. The mind, if not engaged in some useful pursuit, is constantly in quest of some ideal pleasures. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design of his creation, whereas an active life is the best and greatest preservation of health.—*Oracle of Health.*

A great Work of Art—The Box Tunnel.—The Great Western Railway, England, is a magnificent work, and is marked by many extraordinary indications of labour and enterprise. It is the longest independent line of railway completed in England. The "Box Tunnel," which forms one of its principal features, pierces through Box hill, between Chippenham and Bath—part of which is 400 feet above the level of the railway. The tunnel is 9,680 feet long, 39 feet high, and 35 wide, to the outside of the brick work. The excavation amounted to 414, 000 cubic yards, and the brick work and masonry to more than 54,000 cubic yards. About 30,000,000 of bricks were used. A ton of gunpowder and a ton of candles were consumed every week for two and a half years; and 1,100 men and 250 horses were kept constantly employed. For a considerable distance, the tunnel passes through free stone rock, from the fissures of which there was at times an immense influx of water. This formed such an impediment, that the work was on one occasion discontinued for a long time. But the water was finally pumped out through the agency of a steam engine of fifty horse power, which threw it out at the rate of 32,000 hogsheads a day. The contractors, Messrs. Bremer and Lewis, deserve immense praise for their indefatigable exertions.—*Selected.*

Washington Cake,—So called, because it was a favourite at the table of Gen. Washington. *Recipe for making.*—Take two lbs. of flour, one quart of milk, with an ounce of butter, heated together—put the milk and butter into the flour when it is about lukewarm, add a cent's worth of yeast, three eggs and a tea-spoonful of salt; place it in pans over night, and bake it in the morning, in a quick oven for three quarters of an hour.

For the Farmers' Cabinet.

Setting Post and Rail Fence.

Messrs. Editors.—The present low prices of grain and farm-produce generally, with a scarcity of money unparalleled, should induce us to be careful in the expenditure of our means. In this spirit, I propose to show the readers of the "Cabinet" how they may save a considerable sum annually, by adopting my plan of making post and rail fence. It is the custom in this part of the country, to hire a person expressly for this purpose at 12 to 15 cents per panel, with board—an extravagant price, at which he can earn about a couple of dollars a day; but I have for the last 15 years, done this business by means of my *farm hands*, on rainy days, under a shed, all hands being employed at the same time. I have sometimes as many as a thousand posts before hand, ready to set at leisure times, when the farm hands can best be spared; and have made and set 2000 panels of post-fence within the year, at a cost of five cents a panel only; thus saving 150 dollars per annum; having the work better done, and at the most suitable times. I have ever found it an easy task to teach my men to make post-fence; with careful handy men and proper tools, there is neither art nor difficulty. The price for farm labourers in this county, is not more than from eight to ten dollars per month; I therefore calculate that by my plan I save 50 per cent. in expenses, besides the advantage which I obtain by having an extra hand at harvest or busy times at low wages; and I am sending over the country, when my men leave me, good post-and-rail-men accustomed to the business.

I purpose soon to show, from my own experience, how a man can lime his land, and double his crops; by which, the original cost of the lime with its interest, shall be returned within three years from the time *of putting* the lime on the land; and in the mean time remain, respectfully,

Henry Cazier.

Summit Bridge, Del., 15 Nov., 1842.

Small Productive Lot.

David Wedgwood, of Greenland, has gathered this fall from 1¾ acres of land, the following crops:—284 bushels of potatoes; 86½ bushels of Corn; 19 bushels of apples; 6¼ bushels of beans; 6 bushels of green peas; 5 bushels of currants; 4 bushels of red cherries, and 4 bushels of rare-ripes! (peaches?) If our farmers had only half the land they now occupy and would spend the same amount of labour and manure they now do upon the whole, we should hear no more of "going to the far West."—*Bost. Cultivator.*

A large Pear tree in Indiana.

We have, in our State, a pear tree so remarkable, that, if you have seen no notice of it, the following may be of some value. We heard of it from various gentlemen, and saw some notices in country papers, which interested us in gaining better information. One of our nurserymen being in that part of the State, we requested him to visit and gain exact information. He is an accurate man, and his account may be depended upon.

This tree, one foot above the ground, measures *ten feet* in circumference, and *six and a half feet*, at nine feet above the ground. The space covered by the branches, from outside to outside, is sixty-nine feet; that is, the circle formed by a line described around the ends of the branches, would be sixty-nine feet in diameter.

In the year 1834 it yielded one hundred and thirty-four bushels of pears; in the year 1839 it produced eighty bushels; and in the year 1840 it produced one hundred and forty bushels. In one other year, (but which year the account before me does not state,) it produced one hundred and thirty-eight bushels.

This tree grows about ten miles north of Vincennes, Knox Co., Indiana, and is said to have sprung from a seed planted some thirty-five or forty years ago, by a Mrs. Ockletree. The tree is a very rapid grower.

It is perfectly hardy, a constant bearer, and, I need not say, of an enormously productive kind. The fruit is about the size of a turkey's egg; rating as to quality, with about the third grade of dessert pears. It is a fall; early fall pear. The accounts of the time between the planting of the seed and the bearing of this tree, vary from nine to fifteen years. The original owners are dead. We have the fruit growing in our nurseries, near town, and grafts may be sent, should any gentleman in your neighbourhood desire it. I regret that the young man did not ascertain the height of the tree. I am, respectfully, yours, H. W. Beecher.

Indianapolis, September 29, 1842.

Magazine of Horticulture.

"The Exhibitions and rewards of Agricultural Societies, have given an impetus to the spirit of experimental research in the bosom of the *mechanic*, and the result is, an advance in knowledge, equal to that made in any other branch of the practice of agriculture, by the adoption and agency of the same spirit. A practical commentary on this, is offered by the fact, that one maker of Ploughs in England (Ransome of Ipswich,) exhibited no less than thirty-six varieties of ploughs at the last meeting of the Royal Agricultural Society of England."

For the Farmers' Cabinet.

The Peach Worm.

It is quite clear to me, that the death of the Peach Tree is not attributable to the ravages of the worm. A very intelligent, careful, and observant Jersey-man, long engaged in the cultivation of the peach tree, informs me, that although he has taken all the care and pains imaginable to protect his trees from the worms, and has been quite convinced that no worms had ever made an attack upon them, yet he has found his trees to decay and die, just at the same age as those of his neighbour, who had never hunted a worm in his life. His trees, therefore, were as effectually destroyed by the disease called the *yellows*, as his neighbour's were by the worms—another proof, if that be wanting, that the worms are the *effect* of disease and not the *cause*; a new doctrine, but true.

Then comes the inquiry, how can the evil be prevented? Some one has proposed to raise stocks of the common wild plum, by sowing the seed, and budding them in the rows, about two feet from the ground, calculating that trees thus raised would produce fruit the third year from the seed; and giving it as his opinion, that the stock would keep pace in growth with the budded tree, so that there would be no enlargement or contraction above or below the place of budding. Is there novelty in the suggestion, or have any of your readers experience of the result?

I have perfect faith in the beneficial use of calcareous substances applied to the roots of trees, sensible, as one of your correspondents has observed, that "oxygen is the basis of acidity," with which all putrid substances are charged: and it is with this view that Major Reybold of Delaware—that first of cultivators of the peach, for he and his sons and sons-in-law now number 78,000 peach trees planted in orchards—is at this time actively engaged in dressing his trees with shell-marl, by depositing a quantity at the root of every tree, to be pulverized by the frosts the ensuing winter. He also cultivates his orchards with the plough; turning a shallow furrow over the whole surface of the land, three times during the summer—a weighty affair, seeing that one of these orchards contains more than 100 acres—by these means he conceives that he renovates the land and benefits the health of the trees, which are indeed in full vigour, although many of them are very old, and the size of some apple trees of mature growth. I remember also, that Mr. Dager, one of the proprietors of the lime-quarry, mentioned at p. 309 of the 4th vol. of the Cabinet, the lime from which was proved by analysis to yield 96. 6 per cent. of carbonate and not a trace of magnesia, increased the size of the fruit of an apricot tree three-fold, by digging in around its roots a quantity of lime; adding also to its flavor in an equal degree. I conceive that the readers of the Cabinet would feel under obligations to that gentleman, if he would inform them, through its pages, of the quantity of lime applied; as also at what season of the year the experiment was made; stating the effect on the growth of the tree and its lasting energies; whether the lime was hot or slacked; and any other particulars relating to the interesting subject. A. T. B.

November 22, 1842.

Cranberries.

"The cultivation of the cranberry (*oxycoccus macrocarpus*) has not, we believe, received much attention. Most of those usually exhibited in our markets, are gathered by the country people from the bogs and swamps where they grow *wild*, without any assistance whatever from the hand of man. Like all our native fruits, however, the cranberry is susceptible of being improved by cultivation. In Massachusetts many farmers cultivate from one to a dozen acres, and as the fruit brings readily a dollar per bushel in the Boston market, they find them the most lucrative crop they can raise. It is stated in the New England Farmer, Vol. ix. No. 18, that Mr. F. A. Hayden, of Lincoln, in that State, raised, in 1830, four hundred bushels, for which he received four hundred dollars in cash. This is profitable farming.

"Kenrick, asserts Sir Joseph Banks, who had taken pains to obtain the *oxycoccus macrocarpus* from America, harvested in 1831, from a square of eighteen feet each way, three and a half Winchester bushels, being at the rate of 460 bushels to the acre. The soil most suitable to the culture of this plant, is a low, moist and swampy muck, but large crops have been taken from lands in every respect precisely the reverse of that in which they flourish in their natural state. Even light sandy loam, and in which there is a predominance of vitreous or silicious matter, if manured with compost of clay, muck, and swamp mud, and kept uniformly and moderately humid, will produce excellent cranberries. It is even asserted by those who have had ample experience in the business of cranberry culture, that the vines, under this treatment, will not only be much more thrifty and prolific, but that the fruit will also be much larger, fairer, and of better flavor than that gathered from vines in their natural state. On most farms, however, there are numerous low places which might be advantageously devoted to this plant, and wherever such places are to be found on a farm, they should unquestionably be selected in preference to artificial or compounded soils. The method of planting, in such locations, is to dig holes in the turf, one or two, or two and a half feet deep and two feet over. Into these holes are placed the sods or compact turfs, containing the roots which are then carefully covered with the soil, and a sprinkling of beach-sand thrown over the hill. The hills should be four feet apart each way, which gives ample scope for the vines to trail or branch out. Plants, cultivated in this manner, come rapidly into bearing, after which nothing more is requisite for several years, than merely to give them a slight dressing, occasionally, and to supply new plants where the old ones have decayed, or died out. A plantation, managed in this way, is a most valuable appendage to any farm; and in this section of the country, where the fruit brings one dollar and fifty cents, and often two dollars per bushel, it would be peculiarly so. The labour of harvesting the cranberry is very simple, and very expeditiously performed by means of a rake, constructed exclusively for the purpose, and with which, in favourable seasons, a skillful hand will gather, with ease from fifty to a hundred bushels a day."

Fallowing.

Land dries much sooner when stirred than when left untouched: simply harrowing the surface dries the soil rapidly, when the weather is fine; and why is this? It is, because the water and air in the unmoved soil is in a comparative state of rest or balance: and having the same surface exposed to the sun and wind for a long time, they at length saturate the particles of the soil exposed to their influence, and, consequently, at last excite little fermentation; when, however, the surface and clods of earth are disturbed by the harrow or plough, every part is freshly exposed to both sun and air; fermentation is strongly revived, and dryness rapidly ensues. A gardener whilst digging, always takes pains to break each spit of earth in pieces, both on the top and bottom of the trench; knowing from experience, that this extra labour and care will be amply compensated, by the proportioned superior produce of the next crop. When a soil is broken up by the plough and highly pulverized, this essential effect, *fermentation*, is gained; which cannot take place without the presence and consequent decomposition of air or water, or both; the constant interchange of the air, charged with moisture, ascending and descending through the pulverized soil by the influence of the interior fermentation, the day's heat and the night's chill, leaving behind a quantity of moisture sufficient to keep the soil damp, even in the driest seasons. The ploughman's experience satisfies him of this fact, but it is not discoverable in unmoved land, which is generally hard, dry, and full of cracks during the summer months. And when vegetable and animal manures are applied to the soil and buried by the plough, they undergo fermentation, and gases of various natures are evolved; these passing into the finely pulverized earth become arrested in their nascent state by the minute particles of the same, and are there strongly retained, so as to exhibit for a series of years afterwards their presence, by the superior crops that follow. Meat of all kinds is sweetened and made tender by being buried in the earth for a day or two, for the soil commences a digestive process, and imbibes and retains all the putrid effluvium as it generates. Dogs are, by their instinct aware of this, when they bury a bone; otherwise, from the acute smell of their own species in general, their store would be easily discovered, if the least effluvia escaped during that time, and the treasure be robbed; but such an occurrence is very rare. A portion of soil taken from a cultivated fallow, and compared with an equal quantity from an exhausted soil close adjoining, with wheat in the ear growing on it, exhibited this difference—the fallowed soil retained moisture longer; and when both were equally dried, the former regained moisture from the air quicker than the latter—a most important fact. Again, a thermometer was inserted three inches into a soil cultivated and pulverized a few hours before, and then plunged the same depth into the same soil close by, which had not been recently removed; and the result proved that the fresh mould raised the quicksilver at least two degrees higher than the unmoved earth.

The cultivation and pulverization of soils increase their powers of decomposition or fermentation, and this will ever be denoted by the proportioned increase of the growth of plants; likewise, by the more rapid decay of vegetable or animal substances contained therein; but vegetables *growing* in a soil, have the tendency to lower the temperature of the same, caused, it is conceived, partly by their shade and partly by their very act of growing, which, by transforming the more solid and liquid manures about their roots into a rarer or gaseous form, occasions the difference, from the consequent consumption of a portion of the surrounding heat taken up in a latent form during the rarefaction of any of the above substances. It is also known, that fish manure when ploughed in, and worked repeatedly with the plough and harrow in fallowing, lasts longer than when simply ploughed under for the crop—a proof, that cultivation and pulverization strengthen the chemical powers of the soil. On the same principle, farm-yard manure will go further when worked into the soil, so as to become intimately mixed, before sowing the crop.—This satisfactory conclusion may therefore be drawn—that the particles composing a well-wrought soil, are capable of *mechanically* retaining and chemically *combining* with air and water and their principles; and also, with the various products from vegetable and animal manures: and this capability of the soil is to be improved, strengthened and perpetuated, by well directed cultivation—thus proving, not only the use, but the necessity and importance of thorough cultivation and pulverization by means of fallowing; the operations for which ought always to be commenced early in the autumn, and in dry weather; then the plough presents an entire fresh and partially dry surface to the influence of the succeeding winter, instead of the same which had been before long exposed during the preceding summer, and was in consequence become stale; therefore, the soil would not derive the proportion of benefit it ought to do from the ensuing winter's frosts and rains, and other changes, which, however, will be gained by the particles of the now fresh turned up surface. Again, the land being broken up as dry as it will plough, the surface not only presents a greater number of particles to immediate exposure, but being at the same time rather dry than otherwise, the winter's rain and snow enter more readily into every part of the clods, which, after the manner of lime, crumbles them to powder: whereas, if the same land be ploughed up wet, so as to knead, the cavities of the soil being already filled with water, like a sponge, can receive no more; and therefore, from the approaching winter, there is no chance to be again moved, or become dry: the fresh rains and snows which fall cannot penetrate through the clods, every interstice being already pre-occupied by the former moisture; and this same quantity, thus locked up, when it has imparted to the soil all that it is capable of, no further benefit is to be expected, except upon the mere surface, where the frosts and sun may occasion a partial dryness. Such land, when ploughed in the spring, will turn up cold, heavy and clammy, instead of being in the fine and tender state of that land which was ploughed dry in early autumn, and now again in a dry season. And if a person follows the plough at that time, and examines the land thus turned up, when the stubble and weeds were buried, he will see that in turning over, it separates readily into small portions, thus materially assisting in the commencement of pulverization; the stubble being found in a blackened and mouldy state, with the weeds quite decayed; and all this proceeding from the fermentation which ensued during the changes of winter, aided by the easy decomposible nature of the substances buried; whereas, if the weeds had been suffered to remain unmolested, they would have continued alive, and have grown, if the winter had proved mild.—*Bland's Principles of Agr.*

STRUCTURE OF THE FOOT OF THE HORSE.—The bones of the foot are not placed directly under the weight; if they were in an upright position, they would make a firm pillar, and every motion would cause a shock; but they are placed slanting or oblique, and are tied together by an elastic binding on their lower surfaces, so as to form springs as exact as those which we make of leather and steel for carriages. Then, the flatness of the hoof which stretches out on each side, and the frog coming down in the middle, between the quarters, adds greatly to the elasticity of the machine. But ignorant of this peculiarity of structure, ill-informed farriers nail the shoe in such a manner as to confine the quarters, and thus cause permanent contraction of the bones, ligaments and hoof, so that the elasticity is destroyed; every step is then a shock, and inflammation and lameness ensue. Mr. Bracey Clark has contrived an expanding shoe, which, by a joint in front, opens and contracts, so as to obviate the evils of the common process.—*Brougham.*

TO PRESERVE FLOWERS FRESH FOR A LONG PERIOD.—Procure a flat dish of porcelain; into which pour water sufficient to nearly fill it; in the water place a vase of flowers: over the vase place a bell-glass, with its rim in the water. This is similar to a "Ward's case," in principle, although different in construction. The air that surrounds the flowers being confined beneath the bell-glass, is constantly moist with the water that rises into it, in the form of vapour. As fast as the water becomes condensed, it runs down the sides of the bell-glass into the dish; and if means be taken to enclose the water on the *outside* of the bell-glass, so as to prevent its evaporating into the air of the sitting room, the atmosphere around the flowers will remain continually damp. This plan is designated the "Hopean apparatus." The experiment may be tried on a small scale, by inserting a tumbler over a rose bud, in a saucer of water.

Gardeners' Chronicle.

For the Farmers' Cabinet.

Fences.

Messrs. Editors,—As materials for fencing are becoming more scarce every year, in this part of the State, our farmers have been turning their attention for some time to the means of lessening the expenses which are continually occurring, to keep their farms in suitable repair. Our fences are either the worm, post-and-rail, or thorn. Unfortunately for us, the thorn has been attacked by insects, which have injured it exceedingly—in some instances it has been almost destroyed. The post-and-rail fence has now become very expensive, in consequence of the scarcity of white-oak timber—the best of which is purchased to be cut into scantling and ship stuff. The plan now coming into use for the worm fence, is to set it upon a good sized stone, elevated at least six inches from the ground, as heretofore.

The rails are first prepared in the following manner:—A measure—say of shingling lath, of the length of the rails, is procured, and holes bored about half an inch in diameter, and four inches from the ends; it is laid upon the rails, and holes bored in them corresponding with those in the measure. When a number of rails are so prepared by boring, and ready to be put into fence, an iron rod suitable to the holes so bored, is set upon the stone or block, on which the fence is to stand, and then the rails are to be inserted on the rod until the panel is completed. The rod is to be bent about one and a half inch at the stone, so that when the fence is completed, it may be clenched or bent over the bottom rail—the panel is secured by making a hitch with a chain or rope, over the joint, and then bending or clenching the iron rod on the top rail—some prefer driving a small wedge at the side of the rod, instead of clenching it, so that the fence might the more easily be removed, if at any time it should be found necessary. The most expeditious and convenient way for making such a fence, is for two persons to be engaged at it at the same time—one at each end of the rail boring the same simultaneously, and then assisting each other in placing it in the fence. A man can bore many hundred holes in a day, and the expense in preparing and setting up a panel, including the rod of iron, would not exceed the expense of preparing and setting up a panel of post-and-rail fence. A great advantage to the farmer in this method of using the iron rod is, that it holds the rails so completely firm at the joint, that no wind as yet, has been of such violence as to move it from the foundation—such a fence, made of good cedar or chesnut rails, will endure until it wears out with old age.

In the ordinary worm fence, each joint requires two stakes, which of cedar or chesnut, cost with us considerably more than the rod of iron. The oak post undressed, is worth about 15 cents—the two stakes for each joint of the fence, worth 12½ cents. Now counting all the expense of both kind of fences, I am well convinced that the iron rod fence is cheaper by 15 cents a panel than the post fence—besides, the posts rot out, and it will be necessary to obtain a new set every 12 or 15 years—and then there will be a loss of at least 10 per cent., in supplying the place of broken rails and resharpening them and others. The iron rod will cost about seven cents—for a five-rail fence, it should be cut about four feet nine inches. The lap of the rails need be no more than about four inches, and the worm about four feet—such a fence, with this worm, will stand the heaviest blows that we are accustomed to in this climate, especially if the rod be well clenched on the top rail. There may be a saving of one, or even two rails to the panel, in substituting blocks of wood cut short, and bored so as to suit the rod through which it is to be inserted.

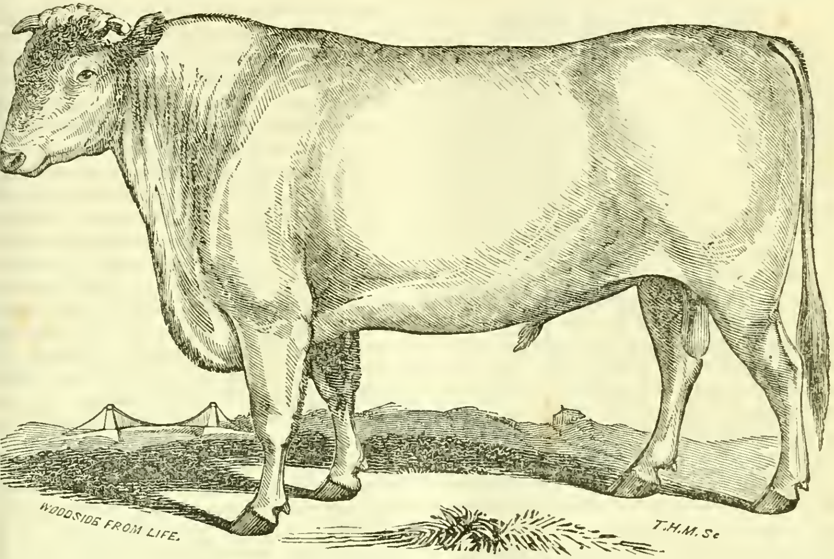
If the above communication may be considered worth inserting in the Cabinet, it is freely at your service.

An Old Farmer.

Salem County, N. J., Dec. 22nd, 1842.

New method of growing Asparagus.—The Editor of the Horticultural Magazine, recommends a trial of the following method of growing asparagus, which is practiced at Nice, and of which a high account is given in the London Gardeners' Chronicle. Take a quart wine bottle; invert it over the head of a stalk of asparagus just rising from the ground, and secure it by three sticks so that it cannot be knocked over. If left in this state, the asparagus will grow up into the interior of the bottle, and, being stimulated by the unusual heat and moisture it is then exposed to, will speedily fill it. As soon as this has taken place, the bottle must be broken, and the asparagus removed, when it will be found to have formed a thick head of tender delicate shoots, all eatable, and as compact as a cauliflower.

To Destroy Ants.—Mix an ounce of powdered arsenic with a quart of water, boil it half an hour with some sugar, and place the syrup in small shallow vessels—oyster-shells will do—in places infested by them. The sweetness attracts them, and the consequences are speedily fatal.



COLOSTRA;—*The property of Messrs. Wright and Turner.*

olostra by Colossus, (1847)—dam, Miss Fairfax, by Fairfax, (1023,) g. d. Lily, by young Warlaby, (2812) gr. g. d. by young Dimple, (971) gr. gr. g. d. by Snowball, (2648.), &c.

This noble animal, perhaps better known by repute than any other improved short-horn the United States, is of the purest white, with a silkiness of hair remarkable, through hich, the peculiar fleshy colour of the skin is very perceptible. His docility is remarkble, and his appearance majestic. Our engraving is from a painting by Woodside, from fe; which, with all who know that talented artist, will confer a value upon it, worth more han the amount of our subscription for the year. Colostra was purchased at the sale f Mr. Whittaker's imported stock at Powelton, by Mr. C. Wolbert, in whose possession e remained for about four years, obtaining the name, "Unrivalled," and an offer of $2,800 or his purchase; he is now seven years old, in perfect health and full vigor, and a sight f him would repay the expense of a journey of a hundred miles, to any one engaged in earing improved short-horned stock.

It may not, perhaps, be out of place here, to state a few particulars relating to the first ntroduction of this favourite breed of cattle, which are gleaned from Youatt's work on "Catle, their breeds, management and diseases," published by Grigg & Elliott, No. 9 N. Fourth treet, Philadelphia, and which ought to be in the hands of every stock breeder in the Union. It is said, "Mr. C. Colling, sensible of the difficulty of breeding with certainty, *arge, good animals*, formed a resolution to reduce the size of the Teeswater, and by that neans to improve its form: this he did through the medium of a bull called Hubback, an nimal, respecting which there has been much controversy; at the same time, we have o superior short-horns which do not claim descent from him. The possessor of the dam f Hubback, was a person of indigent circumstances, who grazed his cow in the highvays; the calf drew the attention of a person by the name of Waistell; but as the owner sked 8£ sterling for him when less than a year old, the bargain was not struck; but one lay, happening to meet Mr. R. Colling, he asked his opinion of him, and was answered, hat he considered 'there were some good points about him.' There was something in is manner of saying this, which induced Mr. Waistell to suspect Mr. Colling thought ighly of the calf; he therefore hasted the next morning, and concluded the bargain; but ad scarcely done so, when Mr. Colling arrived for the same purpose! And as the two ode home together, they agreed that it should be a joint speculation.

"In the end, the little animal was transferred to Mr. C. Colling, who, with a quick eye, saw his value, and eft Mr. Waistell to regret ever after, his having parted with him; for Mr. C. would never allow him to serve, even one of Mr. W.'s cows, but kept him exclusively for his own stock. The quality of his flesh, hide and hair, are supposed to have been seldom equalled; and as he was smaller than the Teeswater, he was eminently qualified to further Mr. C.'s views. He was the sire of the dam of the bull Foljambe, who was the randsire of Favourite, from whom every superior short-horn for many years, traced back its descent. Favourite was the sire, by a common cow, of the famous Durham ox, which travelled on exhibition for six ears, his owner refusing £2000 sterling for him. His live weight was 3,400 lbs., which did not arise so much rom size, but peculiar formation; for he was, comparatively, not a large ox."

For the Farmers' Cabinet.

Agricultural Exhibitions.

Messrs. Editors,—If I know myself, nothing was farther from my wish, than to bring the Philadelphia Agricultural Society into "disrepute;" and your correspondent, Culley, was never farther from the truth, than when he accuses me of the intention; which he has altogether mistaken. It is the system of judging and awarding publicly, that I am opposed to; and I cited cases to corroborate my views, without regard to individuals composing examining committees. I am quite ready to admit, that amongst them are to be found the best judges of cattle and the most respectable members of society; but I have yet to learn, that either judges or cattle, at public exhibitions, are not amenable to criticism. Your correspondent is unfortunate in *accusing* me of being "wonderfully pleased with some things;" for he afterwards says, "nothing appears to have been managed to suit his genius;" now I had just expressed myself pleased with the award of the judges, who had, in my estimation, at length done justice to the Prince of Wales; and I point to this circumstance, to show your correspondent that he is again wrong, when he "*honestly*" believes I do not know a good animal when I see one; for here are the judges, "unanimous in their opinion," declaring that I *do* know a good animal when I see one. I suppose I must submit to the punishment of finding myself exposed to ridicule amongst judges of thorough-bred Durham short-horns, for having dared to find any fault with Colostra; and yet, the appointed judges have declared *unanimously*, that his qualities are second rate! If I had wanted coarse beef, I should have known where to go for it; but what I did want, I found in the beautifully-formed rump and buttocks of Mr. Kelly's bull, Prince of Wales; and must again express surprise, that the comparison had not long ago been made by the judges, to his advantage. I again ask, fearlessly, is Colostra worse, or the Prince of Wales better, than they were a year ago? I will also again *presume* to ask, if Leander is at all *improved* since the time when he was declared inferior to Sam Slick; that is, at one year old? I believe not, for at that time he was declared to be a *perfect animal*, by his spirited breeder, than whose judgment in stock, I know of none that I would this day prefer. "But Sam Slick was not this year on the ground;"—true, and I was therefore deprived of the opportunity of ascertaining, whether, in the estimate of the judges, he still retained his superiority over Leander—and would this have been too much to calculate upon, seeing that he is "one of the best bred bulls in America, and in the hands of one of the best breeders and managers of stock in the country?" besides having carried off the first premium, as the best bull on the ground, the last year. But Leander, it may be said, was not then on the ground—true again; but if I were such a person as your correspondent would have you believe, I should not be backward in expressing the opinion, that he would not have been present this year, if his antagonist had not quitted the stage. It must, indeed, be discouraging to a breeder, to find that after all his care and high feeding, he cannot *make* an animal all he would have him; but that such a thing is impossible, I would just point your correspondent to an animal on the ground, boasting the name "Colostra the second," as proof, that "all breed does not go in at the mouth."

Your correspondent must be high in the councils of the judges to know, of a truth, that they were unanimous in their award of premiums to Judge Longstreth for his stock the last year; but peculiarly unfortunate, in ascribing the loss of them to the removal of his cattle from off the ground, *by mistake;* for I would ask, if there was a single exhibitor present, who did not *know* that it was one of the rules of the Society—oft exprest and published—that "all stock must remain on the ground during the days of exhibition?" And doubly galling to the Judge must it have been, thus to be deprived of the honour, through an inadvertency on his part; seeing that the owner of Leander, the year before, received his second premium, (see p. 141, Vol. V. of Cabinet,) although he caused him to be removed from the ground immediately on the publication of the award, declaring that he considered his bull *disgraced* by it, and indulging in unmeasured terms, his opinion of the incapacity and ignorance—not to say prejudice—of the judges! thus breaking through the rules of the Society—himself being one of the framers of these rules—and setting them at open defiance. Now if the owner of Leander—a man in whose judgment I am willing to place as much confidence as in that of any other member of the Society, considers the system so inconsistent and unsatisfactory, I hope I may presume to take shelter by his side, and propose, *respectfully*, that the Society would amend it—which is all that I ever presumed to do.

Your correspondent's charge, of vilifying the individual characters of the judges, I value not—I feel it is unmerited, and that's enough, without retaliation or complaint. Perhaps I know most of them as well as he does; and there are some amongst them, vhom I know I value, more than he *can;* ut this only goes to prove the fallacy of the ystem which I am combating; for we find hat although they are "men selected from he country round; chosen on account of heir long experience; honest men of good udgment, and not afraid to exercise it; and vhose characters for veracity, will never uffer from the insinuations of Z;" yet they re sure to disappoint the hopes of unsuccessful candidates; who, then, as we have een, are too apt to feel themselves at liberty o impugn their motives and criticise their ualifications most unsparingly, although *hey* have not the slightest right to the expression of such feelings; for having committed their cause to their hands, they are ound to submit to their decision, be that vhat it may. So that, as much for the sake f the judges as for the competitors, I am ery desirous of seeing the present system f public awards, everywhere done away; nd return my thanks to your correspondent or the honour he has done me, in considering my plan "worthy of me;" which, I assure him, is all that I aspire to. I conclude n the words of another—

"Observation and comment are unavoidable, wherever there are eyes to see and earts to feel. An honest man will not fear investigation; if he is not sure of his opinions, he will say so, and endeavour to gain ore light; but if he is convinced, he will peak them, and be ready to avow them. here are men who have found persecution nd violence more endurable than concealment of their convictions." Z.

P. S. Your correspondent has done me injustice—I hope unintentionally—in making me say, there were cattle, on which the ociety had heretofore lavished their premiums, *in the most extravagant manner.* I id no such thing. That premiums had een lavishly bestowed on certain animals resent, no one will deny; it was saying, the ociety had been *lavish in their praise;* a erm often used, without the obnoxious meaning appended to it by your correspondent.

Book Farming.—Show me a thrifty, practical and experimental farmer, and I will ow you a man who reads works on Agriculture, or who borrows his hints from a eighbour who takes Agricultural papers.

Show me a farmer whose fences are going o decay—whose half starved cattle are strolling over a brush field—and I will show you man, who, if he is not on a retrograde ack, takes too little interest in agriculture o patronize an agricultural paper.

Cultivation of the Currant.

Very few of our garden fruits are so much neglected as the currant. Its cultivation seems to be in many instances, a matter of no consideration; and when the bushes are once planted, they are left to take their chance, and little attention is bestowed upon them afterwards. Pruning is entirely forgotten, and the plants often become a prey to insects, which soon destroy them. A fruit so generally admired for its good qualities and its many excellent uses, and so universally cultivated, that scarcely a garden exists in which it may not be found, should not be so entirely neglected; for, like all other fruits and plants, it is susceptible of improvement; and had the same attention been given to it that has been lavished upon the gooseberry, we doubt not but that new varieties, far excelling any we now possess, would have been found in our gardens, as common as the new and improved sorts of that fruit.

In France the currant has long attracted attention, and, until lately, has been much more highly esteemed than the gooseberry. But the French horticulturists did not attempt any improvement in the varieties. The Dutch cultivators were the first who seem to have paid particular attention to it; they succeeded in giving a greater value to this fruit by the production of seedlings, and it is from this source that the very best varieties at present known, have been spread over Europe and America.

The late Thomas Andrew Knight, Esq., President of the London Horticultural Society, called the attention of cultivators to the currant, and he attempted the production of new varieties from seed: a paper on the subject was read by him before the London Horticultural Society, and subsequently published in their *Transactions.* Three of Mr. Knight's seedlings are at the present time found in the English catalogues. Mr. Knight, in a letter written but a short period before his death, lamented that the improvers of the gooseberry did not, in preference, select the red currant. Reasoning from his extensive experience in the cultivation of fruits, he believed that fruits which, in their unimproved state, are acid, first become sweet and then insipid, by improved cultivation, and through successive varieties. To this he attributes the excellence of the gooseberry, which he believed had been shown in nearly its greatest perfection, in the climate of England. The currant, he thought, might eventually become a very sweet fruit.

It is well known that the accidental circumstances of soil, situation, &c., in which the currant has been grown, have been the means of so altering the appearance and character of the fruit, that new names have been given to such as have been found in a superior state of growth, and some of the sorts are known under at least half a dozen synonymous terms. We have known individuals who have cultivated the currant many years, who, upon seeing those of superior growth, have inquired the name of the variety, under the impression that they might add a larger and a better sort to their garden: yet how surprised have they been to learn, that it was one and the same kind of which they had abundance already, only in an inferior and neglected state of growth. It is indeed a rare circumstance to find plants in any thing like the vigor they can be made to attain by proper cultivation, the application of manure, and above all, the proper mode of pruning.

It is to the cultivation of the well known and excellent varieties of the currant which we already possess, that we wish to call the attention of cultivators. If their mode of treatment be properly understood, it may be applied to any improved varieties which may hereafter take the place of those that are now known.

Raising the currant from seed.—To grow seedlings, it is important that the largest and best fruit should be selected. To do this, a strong and healthy plant should be taken, and if too full of fruit to prevent its attaining a good size, it should be thinned out, leaving only sufficient for the plant to bring to the utmost perfection; as soon as the fruit is ripe, it should be picked, and the seeds washed out from the pulp: this may be easily done by bruising the seeds in water, and passing the whole through a sieve, and afterwards spreading it out in a cool, shady, situation to dry, after which it may be placed in papers until the time of planting in the month of April. At that season a small piece of ground should be selected for the purpose, and be made fine by deep spading and raking the surface; the seed may then be planted in drills about a foot apart, scattering it thinly, that the plants may not come up so crowded as to require thinning out to any extent. No other care is requisite than to keep the bed clear of weeds: they will produce fruit in the second or third year, when such as are worth preserving should be marked, and the remainder rooted up and thrown away.

Soil.—The currant is perfectly hardy, and will grow in any situation, and in almost any good garden soil; but that in which they produce their fruit in the greatest perfec-
tion, is a deep, rich, mellow loam, somewl
moist; very stiff clayey soils are the le
adapted to this fruit. In sandy soils
fruit is earlier; but the crop is small, a
soon gone. When it is the object to p
duce very superior fruit, the soil should
staked out, and then covered with three
four inches of good old decomposed manu
It should then be trenched 18 or 20 incl
deep, placing the top spit and the manure
the bottom of the trench. When the bed
settled, a little manure may be dug into
surface, and it will then be ready for planti

Raising young plants.—Cultivators v
wish to make large plantations, and are
sirous of raising their own plants, can eas
do so. The cuttings should be planted
in April, just as the buds begin to push,
lecting a shady border, and planting th
five or six inches apart; the cuttings sho
be about a foot long, of the preceding yea
wood, healthy and vigorous, and cut off
rectly below a joint. If the bushes are
be grown in the manner of small trees, w
one main stem, all the eyes should be
out but the two top ones. Planted out
this manner, they make pretty plants, wh
may be removed to the fruiting beds the
lowing year.

Planting out.—The period for plant
out, is any time after the fall of the leaf
autumn until severe frost, and early
spring before the buds have pushed so far
to show their flower buds. In dry situatio
October is probably as favourable a sea
as can be selected, as the plants start i
leaf very early in the spring, often before
cultivator thinks it time to plant out, ar
season is lost; but if the ground is incli
to be wet in winter, the early part of A
is the best season. The modes of plant
are various, some preferring to place th
on the borders of walks, and others in b
by themselves; we think the best plan
when many plants are wanted, to set ap
a small piece of ground for their exclus
growth; but whatever situation is chos
prepare the soil as above directed. T
proper distance at which plants should
set, is six feet apart between the ro
and four feet from plant to plant: less
tances than these will do, but the chan
of procuring large fruit will be less.
plant neatly, a line should be stretched ac
the bed: at the proper distances put dow
small stake, then commence taking out
earth: now place in the plant, setting
against the line; spread out the roots ca
fully, and cover them with fine earth, mak
it firm around the roots, and treading it ligl
when finished; give each plant a pot of
ter, if dry weather at the time of planti

eep the surface of the soil loose and clear om weeds, by occasional hoeings during ie summer.

Pruning.—Next to a good rich soil, pruing is the most important thing to be atended to; neglect in this respect, will be ure to cause disappointment to the cultivaor who expects large and fine fruit. The ranches will shoot up thick and weakly,* nd, if not attended to, and the superfluous nes cut out, the bush will be so crowded as produce only a quantity of half formed lusters, with a few small berries.

It is known to many cultivators, though erhaps not to all, that the currant bears its uit both upon the young wood of last year's rowth, upon that of the second and third ear, and also upon the little spurs which pring from the older shoots; but it is only pon the young and vigorous wood of the receding year, that fruit of superior size nd beauty is obtained.

Insects.—The currant has but few eneies in the insect tribe; the most injurious the borer, (*Ægeria tipuliformis,*) which ats its way up the centre of the stems, ausing great debility, and eventually nearly estroying the plants, or at least incapaciting them from producing any thing but ery small and poor fruit: the bushes are lso in danger of being broken by light inds or with heavy crops of fruit. The est preventive for this insect is to keep the lants in a vigorous state, and well supplied ith strong young wood, as it is only in the lder branches that the borer commences its avages. When they once take possession f the bushes, cut out all the old shoots, esecially such as are in any way decayed, nd encourage only strong new wood: the *phides*, or plant lice, occasionally infest the eaves, but these may be easily destroyed by ne or two washings of whale oil soap.—*lag. of Hort.*

A JOURNAL of Bruges seriously announces iat the Belgian pigeons are threatened by ie directors of the French post-office. Regur communications between Paris, London, russels, Antwerp, Ghent, Bruges, and other ities, by means of pigeons, are now estalished, and some of these aerial couriers re daily despatched in different directions fter the closing of the Exchange. They tate that the French post-office authorities itend to prosecute these pigeons as the earers of letters, contrary to the law which ives to the post-office the monopoly of the onveyance of letters less than one kiloramme, (2lbs.) in weight.

For the Farmers' Cabinet.

Farm Leases.

THE Cabinet for October contains an excellent paper on the "Improvement of Agriculture"—"all true, depend upon it." The only wonder is, that any *improvement* should ever be made or even thought of, without the security of a lease; and yet, how often do we hear land owners complain of the difficulty they find in obtaining a tenant that will do justice to their farms, while they themselves are helping to skin the land, and pocketing one half the ill-gotten gains, without the least compunction of conscience. But in this chapter of misdeeds there are redeeming clauses; I know of some who no longer inquire of their tenants, "how much manure *must* they have?" but "how much *will* they have?" having discovered, that in just the proportion in which the land and the tenant are benefited, so are they themselves advantaged, even in a pecuniary point of view; after which, the satisfaction of beholding the smiles of both, is above all price. Allow me to add a few more extracts, corroborative of the article above alluded to, and to subscribe myself thy friend, S. B.

New Jersey, 28th of Eleventh mo., 1842.

"In Scotland, the leases are generally restricted to nineteen years. The tenant is now left at liberty to treat his ground as he may think fit during the earlier part of his lease, so as to give full scope to the employment of his capital, his industry and skill: being, towards the closing years of his occupancy, bound merely to such a system as may prevent him from scourging the ground; so as to protect the interests of the proprietor. The result of this system is seen in the more judicious arrangement of rotation of crops; in the spread of science, and the application of the skill of the mechanic; in the improvement of the implements of agriculture; in the extensive outlay made by the tenant in draining, &c., and the management of fertilizing manures. On the other hand, we need not look far abroad to perceive where the landlord *cannot* and the tenant *dare* not, expend money in fertilizing the land held from year to year; to note, where the owner's absence, ignorance or extravagance, chills the efforts of tenants in the work of improvement; 'where the good old landlord' has been succeeded by the stranger spendthrift, and the tenant's improvements have been made to minister to his extravagance; where the speculating purchaser has made his investment a good one, at the expense of those farmers whose liberality best deserved his praise; where the loss of the husband has brought a loss of all, and the stranger has gathered the harvest that should have been reaped by the children. No—these are cases which require not to be particularized; for, when felt or seen, no other evidence is needed to teach us that there requires a change; for one such example is sufficient to put a stop to the improvements, and to draw the purse-strings of a thousand tenants-at-will. For one bad farmer upon a long lease, we shall find ninety-nine who are superior to their neighbours, who are tenants from year to year; and it is only by comparing the two, that we see the operation of each principle. Often, when a farmer has his farm on lease, in a district where they are uncommon, when his management is commended, it is urged, Oh, he has a lease; his farm is like his own, and he can do as he pleases."

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* That is, if they are suffered to grow in bunches, istead of one main stem, like a small tree.

In conclusion, take the estimate and sentiments of the Earl of Ducie, as expressed at a meeting of the Gloucester Farmers' Club:—"My opinion is, that until the question of leasing is fairly and clearly understood, all efforts after improvement will fall short of what they ought to be. For myself, I can say I never wish to see any man enter upon a farm without a lease; but in return, I must have intelligence: I would not grant a lease to the man, who, because his father and his grandfather did so and so, refuses to change his system; but to a man of intelligence, I would give the most liberal encouragement. I would regard that tenant as a blockhead, who would sink money without the protection of a lease; because, however much confidence he might have in his landlord, he has no security for similar treatment, in the event of a son or trustee becoming the manager. In my estimation, no man is justified in expending money in improvements, unless the value is secured to him and to his children after him, by lease."

THE following is mentioned in the local papers, as one of the most remarkable instances of the rapidity of steam navigation. The Royal Mail steamer, Columbia, sailed from Liverpool on the evening of the 19th of July, and arrived at Boston on the morning of the 1st of August. The Acadia left Boston on the afternoon of the 1st, and reached the Mersey in the forenoon of the 13th of August, bringing replies to letters dated Liverpool, July 19th. The interval between sending the letters and receiving the replies to them, was a few hours more than 24 days! This is the most rapid conveyance of letters between the Old and New world ever known.

For the Farmers' Cabinet.

Ploughing Match at Port Penn.

"Honour to whom honour."

MR. EDITOR,—I was so well pleased w the working of the centre-draught and s soil ploughs in planting my potatoes, tha immediately determined to place at the posal of the committee of St. George's ricultural Society, a valuable bull-calf of Durham breed, a prize to be contended at the ploughing match of the quarte meeting of the Society at Port Penn; accordingly, the following notice was issu The account of the result was drawn up mediately after the trial, for insertion in Cabinet, but has been mislaid until now.

JOHN JONES

October 27th, 1842.

"*To Machinists, Agriculturists, &c.*

"A premium of the bull-calf, ST. GEOR out of Cecilia, by the bull, R. M. Johns will be awarded to any member of the George's Agricultural Society, or any ot Society in Delaware, or elsewhere, who bring on the ground, a plough, or ploug that may perform the best work, on lan be selected at, or near Port Penn, by President and late President of the George's Society, who are the committe attend in the case. All who are friendl the success of the plough, are invited requested to contend for the honour of ducing and using that most useful im ment known to man, as well as the valua prize here offered."

In accordance with the above notic meeting took place at Port Penn on 14th of May, under the auspices of the George's and Appoquinimink Agricultu Society, when four ploughs started for t viz:—

1. Miles's large plough, owned by J Barney, President of the Society; plou man, a coloured man in his employ.
2. The Wiley plough, owned by R. Coy; his son, a lad of 15 years, to gui with his father's team.
3. Beech's Concave, owned by Levi Ry D. Stewart, ploughman, with his own hor
4. Prouty's Centre-draught, owned John Jones; ploughman, R. Carter, f Yorkshire, England.

Each of the ploughmen entered on th separate lands, and performed their w well; the boy, for his age, doing extrao nary work: but the land ploughed by centre-draught plough was the best d that I ever saw; notwithstanding the plou man had just arrived from sea; the land, plough, the team, and the numerous look

being all strange to him. The land—
asured off by himself—was ploughed hith-
about; and so neat and true was the work
·formed, that if a line had been stretched
·oss from the double furrow, and including
there could not have been a variation of
ↄ inches, either in the width of the fur-
v, or height thrown, including also the
aring furrow, which was the best done in
whole; for so straight was the sod laid
l evenly gauged, that the open furrow
s just the width of the share and bar, or
e of the plough, and no more; and most
gantly finished. Notwithstanding all this,
judges, John Barney, Peterson Reading,
l B. Caulk, Esqrs., gave the award to
vi Ryan, the owner of the Concave
ugh; alleging, that if the work had been
ie by the Englishman, (the holder of the
›uty plough) it would have been *better*
formed! a strange award indeed.

John Jones.

Wheatland, Delaware, May 27th, 1842.

Note.—Mr. Ryan never demanded the
l-calf. Whether it was that he consi-
ed it honour sufficient to have obtained
award, or from a feeling that he had not
quered, is not said: the animal, now a
grown beast, will be again submitted
competition.

The Honey Bee, and the Ant.

We have seen how wonderfully the Bee
rks according to rules discovered by man,
usands of years after the insect had been
owing them with perfect accuracy: but
same little animal seems to be acquainted
h principles of which we are still ignorant.
e can, by crossing, vary the forms of cattle
h astonishing nicety, but we have no
ans of altering the nature of an animal,
e born, by means of treatment and feed-
; this power is, however, undeniably pos-
sed by the bees, for when the queen-bee
lost by death or otherwise, they choose a
b from amongst those which are born for
rkers, make three cells into one, and plac-
the grub there, they build a tube around
and afterwards build another cell of a pyr-
idal form, into which the grub grows;
y then feed it with peculiar food, and tend
vith extreme care, and it becomes, when
nsformed from the worm to the fly, not a
rker, but a queen-bee. These singular
ects resemble our own species in one of
worst propensities—the disposition to
r, but their attention to their sovereign is
ally extraordinary, although of a some-
at capricious kind. In a few hours after
ir queen is lost, the whole hive is in a
te of utter confusion; a singular humming
heard, and the bees are seen moving all
over the surface of the combs with great rapidity; the news spread quickly, and when the queen is restored, quiet immediately succeeds; but if another queen is put upon them, they instantly discover the trick, and surrounding her, they either suffocate or starve her to death. This happens if the false queen is introduced within a few hours after the first is lost or removed; but if twenty-four hours have elapsed, they will receive any queen, and obey her.

But the labours and policy of the *ants*, when closely examined, are still more wonderful, perhaps, than those of the bees. Their nest is a city consisting of dwelling-places, halls, streets and squares, into which the streets open; the food they principally like, is the honey which comes from another insect found in their neighbourhood, and which they, generally speaking, bring home from day to day as they want it; late discoveries have shown that they do not eat grain, but live almost entirely on animal food and this honey. Some kinds of ants have the foresight to bring home the insects on whose honey they feed, and keep them in particular cells, where they guard them to prevent their escape, and feed them with proper vegetable matter, which they do not eat themselves; nay, they obtain the eggs of these insects and superintend their hatching, and then rear the young insect until it becomes capable of supplying the desired honey; sometimes removing them to the strongest parts of their nest, where there are cells apparently fortified for protecting them from invasion; and in these cells the insects are kept, to supply the wants of the ants which compose the population of the city. And it is a most singular circumstance in the economy of nature, that the degree of cold at which the ant becomes torpid, is also that at which this insect falls into the same state: this being considerably below the freezing point, they require food the greater part of the winter, and if the insects on which they depend for food, were not kept alive during the cold in which the ants can move about, the latter would be without the means of subsistence.

How trifling soever this little animal may appear in one climate, there are few more formidable creatures than the ant of some tropical countries. A French traveller has described one of their cities, and were not the account confirmed by various testimonies, it might seem exaggerated. He observed at a great distance, what seemed a lofty structure, and was informed by his guide that it consisted of an ant-hill, which could not be approached without danger of being devoured! Its height was from 15 to 20 feet, and its base was 30 or 40 feet square, its sides inclining like the lower part of a pyramid, with the point cut off. He was informed, that it became necessary to destroy these nests, by raising a sufficient force to dig a trench all round and fill it with faggots which are afterwards set on fire, and then battering with cannon from a distance, to drive the insects out and make them run into the flames. These facts, respecting the ant and the bee, may be relied on as authentic; they are the result of very late observations and experiments, made with great accuracy by several most worthy and intelligent men.

Brougham.

The species of ant, *formica saccharivora*, which once appeared in such torrents in the Island of Granada, and destroyed the sugar canes so completely, by undermining their roots, that a reward of twenty thousand pounds sterling was offered to any one who should discover an effectual mode of destroying them, descended the hills in a *flood*, and filled not only the plantations, but the roads for miles. Domestic quadrupeds perished, and rats, mice and reptiles were destroyed by them; and corn birds were so harassed when they alighted on the ground, as quickly to die. Nothing opposed their march; they blindly rushed into the streams, and were drowned in such countless millions, that the aggregation of their tiny carcasses jammed up the waters, and formed a bridge for others to pass over. The large fires lighted in their paths were speedily extinguished by the rush of the masses, and had not Providence swept them away on the torrents of a terrible hurricane in 1780, every thing must have fallen before them.—*Intro. to Ento. Vol.* 1.

If husbandry is made respectable, as it ought to be, it will serve to check one of the greatest evils that bears now heavily upon the community,—the rush of our young men into the learned professions, which are already filled to overflowing, especially that of the law, which, under the present wretched course of legislation, of making litigation cheap, is starving this once honourable and most useful profession.

In agriculture, it was once the practice to take ancient customs as an infallible guide; nothing was then doubted, nothing investigated, and consequently nothing improved. Now, it is the principle to do nothing without a reason,—every thing, therefore, is investigated, and consequently, every thing is improved.

A good temper, a good library, good health, and a good wife, are four choice blessings.

For the Farmers' Cabinet.

Germantown Cow.

To the Editors,—Although not a farr
yet, owning a four acre lot of ground, wl
I cultivate with much pleasure, I read v
great interest, your valuable publicat
and note the various discussions and c
munications on the different breeds of
tle; and with my limited means of ju
ment,—being a merchant, have arrivec
the conclusion that, for dairy purposes,
possess in this country, breeds which
far superior, if care were properly besto
upon them, to any that have been
ported. Some years since, my highly
spected neighbor, John Wistar, Esq., of
mantown, purchased a cow for twenty-
dollars, which I think came from Lehigl
Bucks county. Certainly not much furt
and which never gave more than 15 qu
of milk per day, and yet made 4 pound
butter in 3½ milkings, or equal to 16 lbs.
ter per week. And this she would alw
do when fresh. Her feed was good past
and 8 quarts of ship stuff per day. It i
be regretted that a whole week's gathe
of her cream was not churned at one t
or rather the entire produce of a week n
into butter. This famous cow is dead;
her owner has one of her calves which n
this autumn, 3 lbs. 2 oz. of butter from
milkings. Now, taking into view cost
keeping, where are there any Durham c
which will equal these?

Whilst furnishing this communicatio
the Cabinet, I wish I could properly desc
to those who have to spend their days in
perplexing toils of merchandize, where
and anxiety, far outweigh the labor, the
pleasure and gratification which are der
from the cultivation of a four acre lo
land, which they can easily possess near
city. It is true, a man must rise somev
earlier in the morning, and encounter a l
more fatigue of body; for all which, h
amply repaid by improved health, and
withdrawal of the mind for a short pe
at least, from banks and banking, cloth,
cotton, &c., to say nothing of the ru
cheeks of the children, the pleasant fire
of evenings, no "exchange," or "Wi
party,"—to tempt him abroad,—or, of
delights of summer, when the air is redo
of sweets, as well as vocal with the song
birds. And then the interest he take
having his *heavy crop* of 2 acres of g
mowed and made,—his sugar beets
cleaned from weeds—his corn ploughed,
will afford a delightful as well as us
and rational amusement. (

Dec. 20. 1842.

For the Farmers' Cabinet.

The Ruta-baga Turnip.

Mr. Editor,—In the "Massachusett's
ughman," a correspondent is inquiring
cause of so many "sneers at the busi-
s of raising the ruta-baga turnip; a great
ny at the present day despising the root,
o once thought it nice." In the course
is observations, he gives it as his opinion
t the crop has become deteriorated by
ng grown, side by side, with the French
English turnips and cabbages; they
ing long stems, large spreading roots and
ngy insides, and not keeping well in the
ter; and then he goes on to say, that
rn is found to mix when grown together."
w, if the several sorts of turnip, cabbage
ruta-baga, are grown together, and the
d from either kind be reserved and sown,
re would be no question that the produce
uld exhibit a woful "mixing," indeed; but
they are merely grown together, and not
mitted to seed, I should have no fear of
ir *mixing*, let them be as closely set as
please. But herein is the chief cause
the complaint against both the ruta-baga
the sugar-beet—the land on which they
grown, is not sufficiently *cultivated* be-
e the seed is sown; it should be repeat-
y ploughed and harrowed, and rolled, with
iew first to exhaust the land of weeds, by
ning down every crop so soon as it ap-
rs above ground; and next, to spread a
sh surface of soil to the atmosphere as
en as possible, by which the land becomes
eetened, as well as pulverized to a great
pth; and into this well pulverized soil the
nts send their tap roots, where, finding
triment suitable for their growth, they are
t induced to throw out those strong lateral
ts, so often complained of, but, relying
on the small fibres which shoot forth from
sides of the bulb for a supply of *food*,
llected near the surface of the land, they
pend upon the single tap root for *water*,
m below, which, being supplied in purity
d plenty, the bulb grows to perfection; its
ces, properly elaborated, concocted and
tured, *circulate*, instead of becoming
gnant; and therefore, the plant remains
althy, affording no food for the blight, or
ing animalculæ, which are sure to infest
e crop so soon as its juices become putrid,
m whatever cause that might arise, but
hich is most generally attributable to an
wholesome and sour subsoil; for which,
wever, the subsoil plough is destined to
come a *renovator* indeed. With such
ltivation, the ruta-baga will be found to
no longer spongy and fork-rooted, but
keep perfectly sweet and sound through the winter and late spring. And to this superior cultivation, is, no doubt, attributable the fact, that the largest class of cattle in England, are fattened for the market by the turnip and hay alone; the culture of their root crops being attended to with the greatest care and success; forming the first crop in their admirable rotation, namely; turnips, barley, or oats, clover, wheat; by which their lands are kept clean, and go on improving for ages. The land designed for turnips, is ploughed deep in the fall of the year, and laid dry by means of cross-furrows, for carrying away the winter rains; it is run back in early spring, and when dry and fit for working, it is harrowed and rolled, and cleared from root weeds, and suffered again to rest, to produce another crop of weeds; these are again turned in, and the land is again well worked; and when the weeds again appear, they are again smothered, and the land again well pulverized. All this is performed by about midsummer, when the crop of turnips is sown, after the land has been well manured with compost, collected during the winter, and pulverized by turning in the spring; this being ploughed in by a shallow and very narrow furrow, the seeds are covered by a single light harrowing. It is very customary to sow the turnip crop broad-cast; and a single hand-hoeing is usually found sufficient to keep them clean, after five ploughings and the effectual destruction of as many crops of weeds. This is the universal practice throughout the turnip districts of England, where the system of cleaning the land while no crop is growing on it to form an obstruction to their labours, has long been found to be the most economical, as well as the most effective; the *quality* of the crop being in proportion to the labour bestowed upon it in cultivation.

Since writing the above, my attention has been turned to an account of the management of a field that had become impoverished and choked with weeds, which is worthy the notice of those of your readers who might have lands in the same condition; it is contained at pages 271–2, of the third volume of the Cabinet; and as some of our friends may not be in possession of that volume, I have transcribed it for reinsertion, if it meet your approbation; for I believe it is on a subject which is becoming of growing interest to all who are engaged in the cultivation of the soil; and particularly at this time, when the differences of opinion with regard to the value of root crops as cattle feed, are indeed about as distant as "light from darkness." Vir.

Dec. 29th, 1842.

"The field was an oat stubble—it was ploughed deep and sown with rye in the autumn, when the weeds sprang up with the crop, so as to cover the land like a carpet; but this being fed off by sheep in the spring, they had no time to come to maturity. So soon as the land was cleared by the sheep, it was ploughed, harrowed and rolled, and the weeds were gathered and burnt on the surface; it was then suffered to lie, when the seed weeds sprang up by tens of thousands, but these were smothered at a blow, by being turned down by the plough; when the land was again harrowed and rolled, and cleared from root weeds. In a few days another crop of weeds had made their appearance; but they were again turned down, and the land worked as before; the next crop of weeds was lessened exceedingly by these operations. The field was then spread with a mixture of soaper's ashes and stable manure, which dressing being turned down by a shallow furrow, turnips were sown on the land on the 29th day of June, on one of the finest seed-beds ever witnessed. Thus this field had received five ploughings; the root weeds had been gathered and burnt three times, and four plentiful crops of seed weeds had been turned in and smothered. The land was as clean as a garden; and although another crop of weeds sprang up with the turnips, they were destroyed by the hand-hoe, and the crop of turnips was the best in that part of the country; the largest roots were drawn and reserved for winter use, the remainder being fed off by sheep and young cattle. By these means the land was so enriched, that the crop of barley which followed, was the admiration of the neighbourhood; the yield was prodigious, and sold for an extra price as seed. Clover was sown with the barley in the spring, which, after the crop had been harvested, afforded a considerable quantity of aftermath; and during winter, preparations were made for an early spring dressing of compost, lime forming one of the component parts; and which, laid on at the time of the first shooting of the clover, caused a rapidity of growth, which brought the hay to the scythe a week or ten days earlier than the generality of the crops in the neighbourhood; proving a great advantage to the growth of the second crop of hay. Both cuttings were very fine and the yield great. After the crops of hay were carried, the land was skim-ploughed and the surface well harrowed; it was then turned down by a deep furrow, and wheat was sown on it on the 12th day of October; the crop from which averaged, over the field, 40 bushels per acre, and was all disposed of for seed, to those very men, who had declared that such management "would
do in these parts."

In an experiment of sowing corn *broad*
on the first of June, at the rate of one
a half bushels per acre, on rich land, G
ral Harmon, of Wheatland, Monroe co., N
obtained 18 tons of green stalks per
The stalks were small, and almost ent
without ears, and so full of saccharine
ter, that the cattle ate them perfectly c
when dry, though they were not cut up
The yield was estimated at six tons dry
der per acre, and was raised on a clover
turned over and sown the last of May,
the corn cut Sept. 15. The saccharine
ter, which goes to supply the corn in the
is retained in the stalk when not suffere
ear, and materially adds to its nutritive
perties.—*American Agriculturist.*

Ancient Custom.—The road which
tom had marked out was beaten and smo
and the farmer continued to travel upon
it was a *circle* too, and brought him alw
to the place whence he had started, and
never lost himself. But travelling on
path and at one pace, we wear out the
and incapacitate ourselves from travellin
any other pace,—so, a long course of inj
cious management and cropping, not
exhausts the land, but the practice of a
ence, the cultivation of which requires
exertion of mind, deadens the spirit of
quiry, and leaves the farmer an easy, un
quiring being, knowing nothing from h
self, but governed by an hereditary feel
of obedience to ancient usage. Hannam

A New Principle in Horticulture.

Cabbage.—Mr. H. M. Bidwell, of
city, has just sent us an elegant Cabba
head from his garden, illustrative of a
principle in that important vegetable, a
dentally discovered. About the middle
June, having some last year stumps, wh
had been set out for salad sprouts, he br
off three, about 3 or 4 inches long, and st
them into the ground. They took root re
ily, and grew as thrifty as any other pla
Two of the threee have produced fine s
heads. The one before us measures two f
six inches in circumference, the open,
side leaves being all stripped off. It is
the drum-head shape. The other head
more conical, and apparently a different s
cies. Plants may thus be obtained ea
without the labor and attention required
raising them in hot-beds.—The principle
worthy of notice.—*Farmers' Gazette.*

For the Farmers' Cabinet.

Lime.

Messrs. Editors,—Having had some ex- ience in the application of magnesian e, and from that experience being firmly vinced, that large sums are annually sted by farmers, who can but ill-afford it; only in cost of the lime, but in the ne- ct of vegetable and animal manures, ich the high encomiums on lime cause m to pass by; and honestly believing that advocates for magnesian lime are doing ch harm, with the best motives, I have tten this rambling communication, with least equally good intentions. I do not that lime may never be wanting in a . But I do believe, that in the primitive nations of Chester county, 50 bushels to acre are enough for 50 years;—plaster of is in small quantities, being in my esti- ion, all the mineral required. And here me ask, Where is the proof that more e is required than gypsum? As to "Lan- er county farmer's" analysis, it proves ning. Plain farmers, like the most of us, not even tell what proportion of wheat is gnesia, unless he informs us how many usand pounds of wheat were required to luce the one hundred of ashes? But surely oes not prove that land requires 30 or 40 hels of magnesia to the acre—more espe- ly when he informs us, that magnesia is e of the primitive earths, which form all s." And as they do not use magnesia in gland, it must have been in the soil, as na- formed it. I think chemists find more sum in clover, than either lime or magne- in wheat; and less gypsum in most soils, n carbonate of lime. Would a "Lancaster nty farmer" on that account, advise us to ly 100 bushels of plaster to the acre? Is ot strange, that none of the advocates for gnesian lime, have ever shown us by fair eriment, its great benefits? If they have, as surely not been in the Farmers' Cabi- I think the experience of Mr. Kirk- e, and one or two other disinterested n are given, in which the part limed was er worse, or at least no better, if treated e in other respects; and that is the only way to test it.

have repeatedly offered $100 to any of neighbours, that would show to compe- judges, where a second application of gnesian lime, (no difference how long re, or in how small quantities the first lication was made,) had done any good tever. But would any man be foolish ugh to make the same offer, if plaster, es, vegetable or animal manure was used? , say the advocates for magnesian lime, look at the great improvement in the soil of South-eastern Pennsylvania, by the use of it. Indeed, a man unacquainted with agriculture might think, after reading some of their communications, that we had nothing to do but spread magnesian lime, and reap wheat—as I have heard farmers say, you may sow ashes and mow white clover; never having heard, perhaps, that those most successful in raising wheat, plough down clover, frequently with a good coat of stable manure, or compost into the bargain—taking care never to raise two *dry crops* in succession. I inquired of a Lancaster county farmer, one of the best in the county, how he contrived to grow so much wheat on his farm? His reply was, "by ploughing down clover—we can do nothing without that."

And I will here state, without fear of contradiction, that when I came to this neighbourhood, seventeen or eighteen years since, there was very little wheat grown,—not one-fifth of the present crop; no cattle fed, that could be called fat, unless stalled—where there are now five hundred of the best quality, fed on grass alone: and yet there was then more lime used, and had been for years, than at present: but there was not much clover sowed, very little plaster, and no exertion made to procure vegetable or animal manures: ploughing down clover was never thought of. I have not limed any for nine or ten years; as about that time I commenced reading agricultural works, in which I perceived much more stress laid on vegetable and animal manures, and an *improved system of cultivation*, than on lime. Farmers in England and Flanders, (the best cultivated countries,) lauding turnips to the skies; but consigning magnesian lime to what *Dilly Jones* calls "the dark cellars of popular estimation."

Here permit me to acknowledge the great obligations I am under to the Farmers' Cabinet, and other agricultural works; they have returned the money expended for them, some hundred fold. And although somewhat out of place here, I must further say, we could not raise a peach on my farm, until I followed the plan of wrapping the buts with straw, as directed in the Cabinet. We now have as good fruit as can be produced in the State of Delaware.

But to return: since I have quit liming, I have improved my farm much faster than before. But, say the limers, your land is just now showing the effect of the limings given it twelve or fourteen years ago! This reminds me of a conversation I had with a German friend, not long since. Well my friend, said I, that field of corn does not look quite so good as the one without lime! "I know that," said he, "but lime does no good at first—it must have something to act on; wait until I plough down a good sod of clover and give it a dressing with stable manure; and then you will see what the lime will do." This, of course, was unanswerable. But I will add, that my most productive land has had the least lime; some of it, none, since I have been on the farm. One of my friends had some grass land, that had *run out*, as they say; and as the ground was rocky and difficult to plough, he was advised to *lime it on the sod.* Some years after, I asked him how it answered: His reply was, "not quite so well as if I had *tilted it into the creek;* as in that case I should have saved the spreading."

Another friend residing in Philadelphia, whose father has a country seat up the Schuylkill, informed me, that several of their neighbours and themselves, commenced making experiments at the same time with magnesian lime; and all—I think there were five or six of them—came to the conclusion, that it was of no use whatever, applied to land.

But, say the advocates for magnesian lime, show us your new system—your vegetable and animal manures—your plaster and clover, ditching and draining, without lime. Well, gentlemen, to please you, I will select a farm, easy to find, near West Chester, Pa., with a good rail road from everywhere to it. Perhaps some of you have seen an account of the *products of a Chester county farm*, in the Village Record, when the Hon. Charles Miner was editor. They were very great; but as I only write from memory, I will not pretend to give particulars; but you may be sure, it was one of the best, or Mr. Miner would not have sent the account over the world. The farm selected, belongs or did belong, to Eusebius Townsend. You will say, that farm is near the great valley, and Mr. Townsend, or some one before him, applied large quantities of lime. This is just what I thought myself at the time; but upon inquiry, two or three years since, I was informed, that it had not had one bushel of lime, within the memory of that noted personage,—*the oldest inhabitant.* And here permit me to remark, the best farms in Chester county are not lime-stone land, by any means. They are found in Goshen township, and among the hills of Brandywine.

Let me be understood; I do not say pure carbonate of lime is useless,—having none within my reach, I have never tried it. But, certainly it must require but a small quantity, if, as we are told, some of the very best wheat soils in England, contain but one or two per cent. of lime. If other soils have
yielded 15 or 20 per cent. of pure lim
only proves that pure carbonate of lime
not destroy vegetation, which is more
can be said for magnesian lime. But
Lewis says, it requires less magne
than pure lime, and for that reason the n
nesian is cheaper. Now, how did he
that it requires less? Not by trying e
quantities of each, but from the well kn
fact, that it required less magnesian lim
destroy vegetation, than the pure carbo
If one pint of brandy will destroy hu
life, does it prove that a gill of it will
man more good than a gill of milk, of w
he may drink a quart with impunity?
finally uses Mr. Webb up by asking, if
bushels pure lime to the acre, will do
times as much good as 60 bushels ma
sian? I do not think 600 bushels of ei
would do much good, but I think the m
nesian would do the most harm. Col
Brooking, when asked which of his
was best, replied there was no *best* am
them, but he rather thought Harry
worse than Tom.

If Mr. Webb had said wonders have b
produced by the use of clover, plaster,
an improved system of farming, in spit
magnesian lime, he would have been ne
the mark. Although, I must confess th
can be shown many places in this vicin
where magnesia has gained the victory,
reduced the crops at least one-third.

But there is nothing made in vain; we
know it makes good mortar, and perh
might be useful in destroying the Canad
thistle, if the cure is not considered w
than the disease. Perhaps the Magnes
will ask, how can it be possible, that
many of our intelligent farmers have b
so long mistaken? I will answer that qu
tion by asking another. How was it po
ble our intelligent physicians should h
persevered for some hundred years, in po
ing hot teas down the throats of feverish
tients, who were crying for a drop of c
water to cool their tongues, and have o
but lately discovered that what they so ca
fully kept from them, was the very th
that would have saved their lives!

But I have some hopes of the limers y
I think they begin to see "something rot
in the state of Denmark." When I used
follow the trade of liming, the plan was
harrow it in, on ploughed ground, as soon
slacked; but I discover they now leave it
heaps, from one month to twelve, and th
spread it on the sod. Go on gentlemen
am with you there, I acknowledge it w
not do quite so much harm, "cooked th
way—its the seasoning that does it."

As I may receive a gold plough with

en or eleven years for this communica- n, I think I will give my name in full for r of mistake.

Isaac Wayne Van Leer.
West Nantmeal, Dec. 27th, 1842.

For the Farmer's Cabinet.

Corn-stalk Sugar.

Messrs. Editors,—I am mortified to find Mr. Garnett's Address to the Agricultu- l Society of Fredericksburg, that our in- ligent and interesting young friend, Mr. . Webb, of Wilmington, Delaware, has led in his arduous endeavours, to ascertain m an acre of well cultivated land, what uld be the actual result, in a pecuniary y, of the manufacture of sugar from the rn-stalk; and particularly, that this disap- intment had arisen, not from any fault of s own, but from a failure of the machinery d apparatus, which had been prepared on slight and cheap a scale: but were it not r the fear that I shall be accounted "a ophet of the past," I would say, I always spected that this would be the result. w persons would be apt to calculate the pense attendant on even a small experi- ent in the making of sugar, whether from e cane, the beet, or the corn-stalk; all ho know anything about it, however, are vare of the fact, that the process, even m the first, is proverbially laborious, care- l and expensive. Mr. Webb's apparatus st him about $300: I should rather add 1,000 to that sum; in my opinion, the cause the failure in the attempts to make sugar m the beet, has arisen from the single rcumstance of its never having been taken on a sufficiently expensive scale; in ance, there is no difficulty or delay expe- nced; but there, the machinery is equal the labour required. Mr. Garnett informs , that the mill for grinding the stalks, failed the second day, marring the whole busi- ss; but fortunately, not until it had been ain shown, that the thing is perfectly prac- able, and the results such as to verify the ost sanguine calculations, as to the quantity d quality of the sugar to be obtained. It uld appear that Mr. Garnett was so fortu- te as to meet Mr. T. Morgan, of Louisiana, Mr. Webb's; with that gentleman I have e honour of a personal acquaintance, and n bear testimony to the fact, that accord- g to his experience, the juice of the corn- lk, as tested by the saccharometer, is o-tenths stronger than the juice of the uisiana sugar-cane—a circumstance to be counted for, only by the fact, that the cane es not fully ripen in Louisiana, so that the ice is *incipient;* and to this cause is, no doubt, to be attributed the difficulty which is experienced in the after-process, in manufacturing sugar from the cane in that latitude; where, also, the effects, either of an early or late frost, are so often felt and deplored, and by which their crushing season is materially shortened, and the direful results rendered irremediable. It has been seen, that the juice of the corn-stalk defecates remarkably easy, and goes on to the granulating point without difficulty and with perfect certainty—all which is to be accounted for, from the circumstance, that the corn has been perfectly ripened, and affords a juice properly concocted and matured; which is therefore shown, first by the saccharometer, and again, in the ease with which the granulating process is conducted to perfection.

I have been informed, that Mr. Morgan was so well satisfied of the probable results of the cultivation of the corn-stalk for the purpose of making sugar, that he, the last year, gave orders for the growth of a certain breadth, on his sugar plantation in Louisiana, the past summer, so as to give him a full boiling of juice for his vacuum pan, that the trial might be made on a scale sufficient to produce actual results, by which to calculate, in a pecuniary point of view, the real value of the corn-stalk in the manufacture of sugar, but that his intentions were frustrated—levelled to the dust—by a storm, which prostrated the corn, and entirely ruined his prospects. Now, I should be glad to learn, how his plantations of canes were affected by this storm, and whether they too were prostrated by it? because, if corn is less able to bear the effects of storms than the cane, and is more injured by being blown down, here is a serious difficulty at the outset.

It was reported that Mr. Webb had planted his corn very thick, with the view of rendering the labour of removing the ears unnecessary; would that gentleman inform us if he found any difference in the yield of saccharine, either in quantity or quality of juice, in those stalks from which the ears had been extracted, on comparison with those that had never shown a tendency to produce ears at all? and would he still recommend close planting in the rows; say an inch or two between the stalks? These are interesting questions; for, although I am not so sanguine as to believe with Mr. Garnett, that "sugar from the corn-stalk will, in a few years, be made in every State in the Union," yet that it will become a staple manufacture in the Western States, where the price of corn is from 12½ to 25 cents per bushel, I have no doubt; the *result*, however, being equally beneficial to the Eastern States, as having a tendency to keep Western corn from their markets, and giving employment to thousands of emigrants, as well as others, in the legitimate pursuits of agriculture—a *manufacture* which, unlike many others, will be found productive in a most remarkable degree, of the means of renovating the soil, not *simply and singly*, by affording manure to the land, but in first affording food of the most valuable quality, for almost every kind of stock; while the cultivation of the crop itself, will insure the most perfect system that can be introduced into the field, as there is no doubt the repetition of the same may be followed with impunity for any length of time, the ample returns of manure being sufficient for the perfect renovation of the soil for ages.

I have been favoured with a view of some samples of sugar made by Mr. Webb, the present season; it is sweet, clean, and well grained—the only requisites with those who are acquainted with the fabrication of sugar. It has been objected, that the grains are not large and fully developed—it is only a wonder that any grains at all should be made to appear, from the manner in which the granulating process had been compelled to be carried on; Mr. Morgan, with his 10,000 gallons of liquor at 45°, would soon be able to give a better account of the matter. H. C.

Newcastle, Delaware, January 2nd, 1843.

Fatting Swine.

The food of swine is as much better for being cooked as the food of man. It is more palatable, more healthy, and much more nutritive. The digestive powers of swine are not as easily deranged as those of man, and the former can digest food which the latter cannot. Yet there is great economy in fatting swine on cooked food. Like man, they require a change of diet for health and thrift. From our own experience we have come to the conclusion, that there is a saving of one quarter of the food—more particularly in the article of corn. Some farmers have said that there is a saving of one-third in soaking it for horses. But instead of grinding, scald your corn until it becomes soft, and salt it to your own taste. If your hogs lose their appetite, as they frequently do, by feeding steadily on one sort of food, give them a change for a few times, and they will eat greedily of the old dish again. Let their trough and feed be kept clean, and their lodging dry and warm, so that, as Cobbett says, you would be willing on a pinch of a stormy night, to turn into it yourself, if you could not find a better place. This mode of fatting is very agreeable to the swine, and economical for th feeder. If every farmer in our country wi adopt our directions, what an immense a nual saving would it be to the nation.

Exchange Paper.

Plum Pudding.—Beat eight eggs ve light, add one pint of milk, one quart of flou and three quarters of a pound of butter aft it has creamed; cut and stone your raisin rub them in flour and mix them in the batt with half a nutmeg, wet your cloth, flour i tie it up tight, and shake it frequently prevent the plums from settling at the bo tom; put your pudding in when the wat is boiling; have a plenty of water; two hou will boil it well. The sauce used is ma of sugar, wine and nutmeg.—*Souther Planter.*

A Cheap Paint.—Take one bushel of u slacked lime and slack it with cold wate when slacked, add to it 20 lbs. of Spani whiting, 17 lbs. of salt and 12 lbs. suga Strain this mixture through a wire seive, a it will be fit for use after reducing with co water. This is intended for the outside buildings, or where it is exposed to th weather. In order to give a good color thr coats are necessary on brick, and two c wood. It may be laid on with a brush sim lar to whitewash. Each coat must have su ficient time to dry before the next is applie

For painting inside walls, take as befor one bushel of unslacked lime, 3 lbs. of suga 5 lbs. salt, and prepare as above, and app with a brush.

I have used it on brick, and find it we calculated to preserve them—it is far prefe able to oil paint. I have also used it on woo and assure you that it will last longer o rough siding than oil paint will on plane siding or boards.

You can make any color you please. you wish a straw color, use Yellow Och instead of whiting: for lemon color Och and Chrome Yellow; for lead and slate colo Lampblack; for blue, Indigo; for gree Chrome Green. The different kinds of pai will not cost more than one-fourth as mu as oil paints, including labor of putting o *Ontario Freeman.*

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

Philadelphia, First Month, 1843.

We have lately received the last number of the fir volume of the "British American Cultivator," edite by Wm. Evans, and published at Toronto, in Canad We looked over this paper with much satisfaction, an should anticipate from its tone and general appearanc at the agriculture of Canada will find in it, a valua- e and efficient assistant. The farming interests of at country, cannot fail to appreciate the labours of journal, so well calculated to promote its substantial ealth. Quite amusing, as well as instructive extracts e given from speeches delivered at the North Aller- n Agricultural Society in England. The vice presi- nt finds fault with the Society for confining its "at- ntion too much to the breeding, and exhibition of ock," and thinks that ploughing, sheep-shearing, &c., e of sufficient importance to claim a share, at least, its notice. "Why only give premiums," he asks, to sheep, and cattle, and pigs, which are crammed nd fed by all sorts of manoenvres," and "pampered ith sago and new milk!" He mentions a case at ristol, of a cow that was nourished by the milk of ree or four others, and which after her produce had een measured to swell the account of her milking operties, would turn round to the bucket, and drink p the very milk herself had just yielded. John Bull nows how to do these things, about as well as we ankees.

Our West Nantmeal correspondent has struck off nto a new path, in relation to the use of lime. This well—we like variety in our columns, when it is lculated to lead to useful inquiry, and give thoughts the thoughtful. Some of our readers, who have per- aps in their lives, never had a doubt that lime has one, and is doing, almost every thing for the Agricul- re of the middle States, will be surprised to find our iend Van Leer, eschewing its use almost entirely— rning aside from the advocates of pure lime, as well s magnesia—from B. Webb and S. Lewis, and declar- g that one of the *best*—and as a friend at our elbow, this moment describing it—"one of the most *splen- id* farms in Chester county," has never been limed ithin the memory of man! and on the top of this, sserting that himself has "not limed any for nine or n years," and that he has improved his farm much ster since he quit liming, than before.

This controversy about lime, has reminded us, and o doubt it has others also, of Dr. Franklin's Chinese *hoe*, with the *manner* of wearing which, he so puzzled he philosophical heads of some of his friends. After asking their contrivance to the utmost—one declaring t should be worn in *this* way; and another that it ould only be worn in *that*,—why, gentlemen, said the octor, have you settled the point, that it is by any eans a *shoe?* or that it was intended ever to be *worn* t all!

We have recently noticed upon the shelves of Kim- er & Sharpless, under our own roof, a new and en- arged edition of Comly's Spelling Book, in a neat and ery cheap form. This work has been for many years, xtensively known, as being well adapted to the use f children, in our private and public schools. To this ew edition has been added "a variety of useful ex- rcises, so arranged as to familiarize the pupil with he correct spelling, pronunciation, and meaning, of bout two thousand ambiguous, or difficult words."

With this addition, it is believed Comly's Spelling Book will be found to contain a greater amount of seful and appropriate matter, than any other work of the kind published in this country, at the low price of *one dollar per dozen.*

To prevent confusion in the classes, or needless expense to parents, the publishers have placed all the new exercises at the end of the book; so that the "Enlarged Edition" can be conveniently used in the *same class*, with their former editions.

In "The United States Almanac," which was noticed in our last number, as published by E. H. Butler, of this city, we have observed a table at page 34, giving the decimal of the year, for every day from its beginning to its close. This is particularly convenient for the calculation of interest. If we would know the interest on a certain sum, for a certain number of days, we have only to multiply the yearly interest, by the *decimal* of the year, opposite the number of days in the table. If we would ascertain the interest on a certain sum, for the interval between two certain dates in the same year, we subtract the decimal of the prior date, from that of the posterior one, and multiply the difference by the yearly interest.

We stepped in a few days ago, to look at Tonkins' fine cattle, which the owners are now exhibiting in this city for the examination of the curious. They are all here—the six steers and the spayed heifer. We understand they will be slaughtered about the 22nd of next month. New Jersey may safely challenge the world to produce such a lot of cattle from the herd of one man.

From the "Constitution," published at Woodbury, N. J., we learn that Benjamin B. Shuster, of the "Grove" farm, in that vicinity, slaughtered, and brought to our market, on the 3d ult., two calves, which weighed alive, 600, and 562 pounds, respectively. The weight, when dressed, of the first, was 400,—that of the second, 375 pounds. They were between six and seven months old, and were raised and fed by our friend above named.

At a meeting of the Philadelphia Agricultural Society, held at their hall, on the 4th inst., an election of officers for the ensuing year, was held, and the following were duly elected, viz:

Nicholas Biddle, President.
Dr. James Mease, } Vice Pres'ts.
James Gowen, }
Aaron Clement, Secretary.
Wm. M. Uhler, Assistant Sec'ry.
Algernon S. Roberts, Treasurer.
Aaron Clement, Librarian.
Charles Roberts, } Curators.
Wm. M. Uhler, }
James Gowen, } Com. of Corres.
George Blight, }

By order of the Society,
Wm. M. Uhler, Assistant Sec'ry.

A prolific sheep.—Samuel Allinson, of Crosswicks, N. J., informs us that his neighbour Joseph Hendrickson, has a fine Southdown ewe, which last spring gave birth to four lambs, one black, and three white; which all lived, throve, and are now doing well.

☞ Notices, which are essentially advertisements, are sometimes received, with a request that we would insert them. Although the Cabinet is not professedly an advertising paper, the proprietor would be willing to deviate a little from the plan which has heretofore been pursued, and insert to a very limited extent, short advertisements, the subject matter of which, may be in character with this paper. The terms will be one dollar for each insertion of ten lines or less, and so in proportion for each additional line. The money to be paid in advance. An advantageous medium will thus, we think, be opened for our agricultural friends to make their wants known, as well as to have them supplied.

We had made some extracts from an Address before the Fredericksburg Agricultural Society, by J. M. Garnett, Esq., and intended them for the present number. They are, however, crowded out, and will have to rest for a month.

It is a common saying, that *punctuality* is the *life* of business; and perhaps no class of the community more thoroughly assents to the truth of it, than periodical publishers. Many of our subscribers give us the best possible proof of their good wishes, and interest in our concern, by an early transmission of the small sums due us. Others, from lack of opportunity, or through forgetfulness, fail to let us hear from them quite so promptly as would be desirable. Others again, and not a few, have suffered their subscriptions to remain unsettled for two or three years. *Now these are debts of honour, and we depend on that for their collection.* Some may have long ago ceased to desire the Cabinet, yet have failed to let us know it: how then can we ascertain their wishes? If among those to whom our paper is regularly forwarded, there are any of this description, who do not expect, or mean to pay us the small amounts due, will they not so far do as they would be done by, as to acquaint us, through the post-office, or otherwise, with their intentions? And where subscribers fail to perform this duty, which to ourselves appears so very reasonable, we would be greatly obliged to post-masters to advise us accordingly. We would be very reluctant to send our paper where it may not be desired, and we really cannot afford to send it where it will not be paid for.

The quantity of rain and melted snow which fe in the Twelfth month, (December,) 1842, was 3.657 i

Pennsylvania Hospital, First mo. 1st, 1843.

The quantity which fell in the year 1842, was a littl more than 48½ inches; to wit:

In the 1st month,	1.358 inches.
2nd "	4.265
3d "	2.835
4th "	5.307
5th "	5.865
6th "	3.192
7th "	11.805
8th "	3.786
9th "	1.269
10th "	1.712
11th "	3.487
12th "	3.657
Making	48.538 in. 184

The quantity which fell at the Hospital in 1841, wa 55½ inches: and the average quantity which fell at th same place for the last thirty-three years—from 181 to 1842, inclusive, was .... 38.551 inches

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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From the Southern Planter.

Agricultural Letter from Gen. Washington.

We are indebted to the kindness of an old friend for the following valuable document; valuable not only on account of the source from which it emanates, but because it affords many excellent lessons from an able and practical farmer; it is strongly characteristic of the American hero. We see here the exercise in private life of that attention to detail, and that inflexible devotion to order and discipline, which so eminently marks the public character of Washington. No one can read this letter without seeing at once that the writer was an industrious, sound, *practical* farmer. This great man did not esteem the most minute details of agriculture unworthy his attention.

It will probably surprise the reader, to find General Washington insisting upon the use of harrows and cultivators in the cultivation of his corn; this we have been accustomed to plume ourselves upon as a much more modern invention.

This letter, directed to his overseers, is taken from the manuscript copy in Washington's own hand-writing, and, as we are informed, now appears in print for the first time. Ed's. S. P.

Philadelphia, July 14th, 1793.

Gentlemen,—It being indispensably necessary that I should have some person at Mount Vernon through whom I can communicate my orders—who will see that these orders are executed; or, if not obeyed, who will inform me why they are not;—who will receive the weekly reports and transmit them;—receive money and pay it; and in general to do those things which do not appertain to any individual overseer—I have sent my nephew, Mr. Howell Lewis, (who lives with me here) to attend to them, until I can provide a manager of established reputation in these matters. You will, therefore, pay due regard to such directions as you may receive from him, considering them as coming immediately from myself. But that you also may have a general knowledge of what I expect from you, I shall convey the following view, which I have of the business committed to your charge, as it appears to me, and direct you to govern yourselves by it: as I am persuaded nothing inconsistent therewith will be ordered by Mr. Lewis, without authority from me to depart from it.

1st. Although it is almost needless to remark that the corn ground at the farm you overlook, ought to be kept perfectly clean and well ploughed—yet, because not only the goodness of that crop depends upon such management, but also the wheat crop which is to succeed it, I cannot forbear urging the propriety and necessity of the measure in very strong terms.

2nd. The wheat is to be got into the barns or into stacks, as soon as it can be done with any sort of convenience, that it may not, especially the bearded wheat, which is subject to injury by wet weather, sustain loss in shocks—and because the shattered grain in the fields may be beneficial to the stock; but no hogs are to be put on stubble fields in which grass seeds were sown last fall, winter or spring; other stock, however, may be turned on them, as it is rooting that would be prejudicial.

3d. The whole swamp, from the road from Manley's bridge up to the lane leading to the new barn, is to be got into the best and most complete order for sowing grass seeds in August—or, at farthest, by the middle of September. The lowest and wettest part thereof is to be sown with timothy seed alone. All the other parts of it are to be sown with timothy and clover seeds mixed. The swamp on the other side of the aforesaid lane, now in corn and oats, is to be kept in the best possible order, that the part not already sown with grass seeds, may receive them either this autumn, as soon as the corn can be taken off with safety, or in the spring, as circumstances shall dictate.

No exertion or pains are to be spared at Dague-run to get the swamp from Manley's bridge up to the meadow above, and the two enclosures in the mill swamp, in the highest order for grass, to be sown in the time and manner above mentioned. But that no more may be attempted than can be executed well, proceed in the following order with them, according as the weather may happen to be, for this must be consulted, as dry weather will answer to work in the low parts best, whilst the higher grounds may be worked at any time.

1st. Begin with the swamp from Manley's bridge upwards, and get all that is not already in grass well prepared for it, and indeed sown. 2nd. That part of the lower meadow on the mill run, which lies between the old bed of it and the race, and within the fences. 3d. After this is done, take that part in the enclosure above, which was in corn last year, lying between the ditch and fence of No. 1, up and down to the cross fences. 4th. Then go over the ditch and prepare slipe after slipe, as the ditch runs, from the one cross fence to the other, and continue to do this as long as the season will be good, or the seed can be sown with propriety and safety.

I conceive that the only way to get these grounds in good order and with expedition, is to give them one good ploughing and then to tear them to pieces with heavy harrows. Whether it be necessary to cut down and take off the weeds previous to these workings, can be decided better by experiments on the spot, than by reasoning on it at a distance. My desire is, that the ground shall be made perfectly clean, and laid down smooth; without which, meadows will always be foul—much grass left in them, and many scythes broken in cutting what is taken off.

4th. The buckwheat which has been sown for manure, ought to be ploughed in, the moment a sufficiency of seed is ripe to stock the ground a second time; otherwise, so far from its answering the purpose of manure, it will become an exhauster. For this reason, if the ploughs belonging to the farm are unable to turn it in, in time, those of Muddy hole, Dague-run and Union farm, must combine to do it, the work to be repaid by the farm which receives the benefit, as soon as the work is accomplished thereat.

5th. Where clover and timothy seeds are mixed and sown together, allow five pints of the first, and three of the latter to the acre; and where timothy only is sown, allow four quarts to the acre. Let the seed be measured in the proportions here allotted, and put into a half bushel, and the half bushel filled with sand or dry earth, and extremely well mixed together in your own presence, or by yourself, which will answer two good purposes, viz: 1st, to prevent theft, for seeds thus mixed, would not sell—and 2ndly, the seedsman being accustomed to sow a bushel of wheat to the acre, would be at no loss to cast a bushel of this or anything else, regularly on that quantity of ground.

6th. It is expected you will begin to sow wheat early in August, and in ground perfectly clean and well ploughed. I would have, and do accordingly direct, that not less than five pecks of seed be sown on each acre. The plan of the farm over which you look, is given to Mr. Lewis, from which the contents of each field may be known. And it is my express direction that every watch, and the best attention may be given, to see that this quantity actually is put in; for I have strong suspicions, but this ought not to be hinted to them, that the seedsmen help themselves to a pretty large toll.

7th. As soon as you have done sowing, and even before, if it can be done conveniently, you are to set heartily about threshing or treading out the wheat; and as fast as it is got out, to have it delivered at the mill or elsewhere, according to directions. The longer this business is delayed, the more waste and embezzlement will there be of the crop. The wheat is to be well cleaned; the chaff and light wheat are to be properly taken care of for the horses or other stock—and the straw stacked and secured as it ought to be, against weather and other injuries; and until the whole be delivered, it will require your constant and close attention.

8th. The oats at the farm you overlook, are, I presume, all cut; in that case, let all the scythes, and cradles, and rakes, which you have received, be delivered over to the mansion house; or if you choose to keep them against next harvest, you must be responsible for them yourself.

9th. The presumption also is, that the flax is, ere this, pulled; let it be well secured, and at a proper season stripped of its seed and spread to rot. During this operation let it be often examined, that it be not overdone, or receive injury in any other respect, by lying out too long.

10th. Get the cleanest and best wheat for seed, and that which is freest from onions. I would have about one-third of my whole crop sown with the common wheat; one-third with the white; and the other third with the yellow bearded wheat. The overseers, with Davy, as he knows the state of his own farm and the quality of the wheat which grows upon it, may meet and decide among themselves, whether it would be best to have some of each of these sorts on every farm; or, in order more effectually to prevent mixture, to have one sort only on a rm. In the latter case, the cutting of that hich ripens first, and so on, must be acomplished by the force of all the farms, inead of each doing its own work. If the eed on one farm was to be sown on another, specially if seed which grew on a light soil, as to be sown on a stiff one; and that hich grew on a stiff one, sown on light round, advantages would unquestionably esult from it.

11th. The potatoes at the mansion house ust be worked by the ploughs from Union rm, and when this is required, it would be est, I conceive, to accomplish the work in day.

12th. It is expected that the fences will be ade secure, and no damage permitted with- them by creatures of any kind, or belong- g to any body—mine any more than others.

13th. The greatest attention is to be paid the stocks of all kinds on the farms; and e most that can be made of their manure nd litter. They are to be counted regurly, that no false reports may be made; nd missing ones, if any, hunted for until ound, or the manner of their going can be ccounted for satisfactorily.

14th. A weekly report, as usual, is to be anded to Mr. Lewis. In this report, that I ay know better how the work goes on, ention when you begin to plough, hoe, or therwise work in a field, and, when that eld is finished. The increase, decrease and hanges are to be noted as heretofore—and et me ask—

15th. Why are the corn harrows thrown side, or so little used, that I rarely, of late, ver see or hear of their being at work? I ave been run to very considerable expense providing these and other implements for y farms; and to my great mortification and jury, find, generally speaking, that whereever they were last used, there they remain, not stolen, till required again; by which eans, they, as well as the carts, receive so uch injury from the wet weather and the eat of the sun, as to be unfit for use: to reair or supply the place of which with new nes, my carpenters, who ought to be otherise employed, are continually occupied in hese jobs. Harrows, after the ground is ell broken, would certainly weed and keep he corn clean, with more ease than ploughs. hope, therefore, they will be used. And t is my express order that the greatest care e taken of the tools of every kind, carts nd plantation implements, in future—for I an no longer submit to the losses I am coninually sustaining by neglect.

16th. There is nothing I more ardently esire, nor indeed is there any more essenial to my permanent interest, than raising of live fences on proper ditches or banks; yet nothing has ever been, in a general way, more shamefully neglected or mismanaged; for, instead of preparing the ground properly for the reception of the seed, and weeding and keeping the plants clean after they come up, the seeds are hardly scratched into the ground, and are suffered to be smothered by the weeds and grass, if they do come up: by which means, the expense I have been at in purchasing and sending the seeds, generally from Philadelphia, together with the labour, such as it is, that has been incurred, is not only lost, but—and which is of infinitely more importance to me—season after season passes away, and I am as far from the accomplishment of my object as ever. I mention the matter thus fully, to show how anxious I am, that all these seeds which have been sown or planted, on the banks of the ditches, should be properly attended to; and the deficient spots made good if you have, or can obtain the means for doing it.

17th. There is one thing I must caution you against, without knowing whether there be cause to charge you with it or not,—and that is, not to retain any of my negroes, who are able and fit to work in the crop, in or about your own house, for your own purposes. This I do not allow any overseer to do. A small boy, or girl, for the purpose of fetching wood or water, tending a child, or such like things, I do not object to; but so soon as they are able to work out, I expect to reap the benefit of their labour myself.

18th. Though last mentioned, it is not of the least importance, because the peace and good government of the negroes depend upon it—and not less so my interest and your own reputation. I do, therefore, in explicit terms enjoin it upon you, to remain constantly at home, unless called off by unavoidable business, or to attend Divine worship; and to be constantly with your people when there. There is no other sure way of getting work well done and quietly, by negroes; for when an overlooker's back is turned, the most of them will slight their work, or be idle altogether. In which case, correction cannot retrieve either, but often produces evils which are worse than the disease. Nor is there any other mode but this, to prevent thieving and other disorders, the consequence of opportunities. You will recollect that your time is paid for by me, and if I am deprived of it, it is worse even than robbing my purse, because it is also a breach of trust, which every honest man ought to hold most sacred. You have found me, and you will continue to find me faithful to my part of the agreement which was made with you, whilst you are attentive to your part; but it is to be remembered, that a breach on one side releases the obligation on the other. If, therefore, it shall be proved to me that you are absenting yourself from either the farm or the people, without just cause, I shall hold myself no more bound to pay the wages, than you do to attend strictly to the charge which is entrusted to you, by one who has every disposition to be

Your friend and servant,
Geo. Washington.

For the Farmers' Cabinet.

The Quince.

As the time for planting fruit trees will soon come round, I wish to call attention to, and invite a more extended cultivation of the quince tree. The fruit of this tree, either green or dried, always commands a very generous price, and the market is never overstocked with it. The quince produces the finest fruit when planted in a moist soil, and in a sheltered situation; it may be propagated by layers or cuttings, or by grafting. The younger trees produce the finest fruit, and they should be renewed every 10 or 12 years, as by that time they become aged, though they will survive for a much longer period, but not generally to produce fine and fair fruit.

The trees being small, they occupy but little room, and are not very liable to be injured by cattle, if placed near a fence. A field of 10 acres, is 660 feet on each side, and at a distance of 10 feet apart, which will be sufficient, will well accommodate 264 trees around the fence, without interfering with the agricultural operations within the enclosure. In a few years this number of trees would produce, on a very moderate calculation, 66 bushels of quinces annually, which at the lowest price they were ever known to sell, would net a sum clear of all expense, far greater than can be produced by any other crop occupying the same space. The usual price of the green fruit is from four to six dollars per bushel, and the dried article sells proportionably high. Why is it that the West, which forwards so large an amount of dried peaches and apples to our eastern cities, sends no dried quinces, which would sell for more than double the price? A.

It is said that *Bronchitis*, and all similar affections, may be prevented by bathing the neck and breast every morning with cold water. The experiment is at least worth a trial.

For the Farmers' Cabinet.

High Prices and Low Prices.

Farmers should bear in mind, that low prices have always heretofore been followed by high prices; and extravagant and high prices are uniformly succeeded by low ones; the oldest farmer living, cannot point out a deviation from this rule; in fact, it may almost be said to be a law of nature; it is the way things have always worked throughout the whole world; where is the man that has experience to contradict it? In times of depression it is a mark of wisdom to go ahead and prepare for a better state of things.—Manure your land and bring it into a better state of cultivation, now when it can be done cheaply, and be ready to set sail when the tide turns; never wait till the market is up to begin to improve your land, or you will be sure to have but little to sell when the day of generous prices comes about again, which it surely will do. It is best for a farmer always to keep his hand in, as the saying is, and not go to sleep on his dung fork, when his land needs waking up with some stimulating nutriment. Those whose memories are sufficiently retentive to remember 1819 and 20, may recollect the desponding of that period; all the products of agriculture were low, very low indeed, and many thought they would never rise again—a gloom spread over the whole country, and not a few suffered their farms to deteriorate, thinking it useless to spend money and labour in their improvement. Well, what followed!—a time of prosperity and money getting and spending, to such an extent as has rarely been known in any country. Something like this may again happen; at all events, when our unwise law makers get tired of trying foolish and pernicious experiments, and permit the mechanics and manufacturers to work for the farmers without too much competition from foreigners, and the farmers to feed them and to supply them with the raw materials to work upon, we may look for more prosperous times and better prices for agricultural products. W.

Shipley Church, in Sussex, repeats 21 syllables. In the whispering gallery of St. Paul's Church, London, the faintest sound is faithfully conveyed from one side to the other, of the dome, but is not heard at any intermediate point. In the Cathedral of Girgenti, in Sicily, the slightest whisper is borne with perfect distinctness from the great western door to the cornice behind the high altar, a distance of 250 ft.—*Pierce on Sound.*

Bommer's Method of Making Manure.

We invite attention to the annexed report of Dr. Beck, on Bommer's method of preparing Manure. From a careful examination of the specifications and directions furnished us by Mr. Bommer, as well as from a personal examination of the process, from the forming of the heap to its opening, we are convinced that the method must prove valuable, and the manure so prepared, of the best quality. There are many farms on which immense quantities of coarse grass, thistles, sedge, flags, and other weeds, are annually grown, of which no use can be profitably made—all these, and with them the large piles of straw which are heaped round many barns to cause them to decay, may by this method be expeditiously and cheaply converted into the best of manure—the cost of the materials which the farmer will have to purchase, being only from fifteen to twenty cents per cord, and the labor only such as is necessary to form a compost heap of any kind.

Report on Bommer's process of making Vegetable Manure by Fermentation.

At the request of Mr. Bommer, the undersigned were present on the 14th of September, at the preparation of the materials used by him for making the above manure. As Mr. Bommer's process is patented, it will of course not be expected that the committee can go into details further than what he himself makes public. They have, however, no hesitation in stating, that the materials mentioned in his specification were all used; that the experiment was in every respect fairly made; and that the whole is evidently conducted on the most approved chemical principles.

Two heaps were prepared; the first made of dry materials, principally straw of various grains, and probably weighing about 1000 lbs.; the second was composed of ligneous vegetables, dry and green—such as cornstalks, potatoe stems, thistles and various other weeds. This weighed probably about 450 lbs., and was propped against the first heap.

The following table was kept at the request of the committee. It exhibits the degree of heat developed during the process of fermentation, ascertained daily by immersing the bulb of a thermometer in the centre of each heap.

First heap—Dry Straw.

		Degrees.
Sept. 15, at	6 o'clock P. M.	76
“ 16, at	7 o'clock A. M.	87
Sept. 16, at	6 o'clock P. M.	90
“ 17, at	7 o'clock A. M.	96
“ at	6 o'clock P. M.	98
“ 18, at	8 o'clock A. M.	103
“ 19, at	5 o'clock P. M.	95
“ 20, at	7 o'clock A. M.	102
“ at	6 o'clock P. M.	107
“ 21, at	7 o'clock A. M.	113
“ at	6 o'clock P. M.	117
“ 22, at	7 o'clock A. M.	126
“ 23, at	10 o'clock A. M.	112
“ 24, at	10 o'clock A. M.	123
“ 25, at	10 o'clock A. M.	137
“ 26, at	10 o'clock A. M.	152
“ 27, at	10 o'clock A. M.	116
“ 28, at	9 o'clock A. M.	122

Second heap—Green Stuff.

		Degrees.
Sept. 16, at	6 o'clock P. M.	80
“ 17, at	7 o'clock A. M.	109
“ at	6 o'clock P. M.	127
“ 18, at	8 o'clock A. M.	161
“ 19, at	5 o'clock P. M.	136
“ 20, at	7 o'clock A. M.	152
“ at	6 o'clock P. M.	161
“ 21, at	7 o'clock A. M.	173
“ at	6 o'clock P. M.	178
“ 22, at	7 o'clock A. M.	184
“ 23, at	10 o'clock A. M.	142
“ 24, at	10 o'clock A. M.	157
“ 25, at	10 o'clock A. M.	182
“ 26, at	10 o'clock A. M.	201
“ 27, at	10 o'clock A. M.	138
“ 28, at	9 o'clock A. M.	146

The fermentation was discontinued Sept. 28, when the heaps were opened for exhibition. The committee examined them on the 8th of October, and are quite satisfied that the result is a satisfactory one. The heap formed of 1000 lbs. dry straw, was found to contain by measurement 225 solid feet, or one cord and three quarters, estimated to weigh 4000 lbs. The material furnished must prove a valuable manure; and the more so, as it employs many articles now worthless or deleterious. In all matters of this nature, experience is of course worth more than mere theory; but it will be a matter of great disappointment, if a process combining as this does, an application of the most correct chemical principles, with the employment of the most efficient agents, does not in due time, become a favorite with the farmer. T. R. Beck, *Chairman.*

Mr. Bommer states in his prospectus, that the merit of his method essentially consists in the four following important points:

1. In being able to reduce in a short time, all kinds of straw and ligneous weeds to a rich, unctuous and durable manure, such as

wheat straw, barley, rye, buckwheat, and other black grains; stalks of Indian corn, rice, and other plants; dried or green potatoe tops, leaves, stalks, and roots of all kinds of plants; green or dried reeds, green rushes, sea weeds, heather broom, stubble, in fact every thing belonging to the vegetable kingdom, and a great many other things lying about farms which are often allowed to go to waste. Even the ground itself may be converted into the best manure or compost.

2. In the combination or alliance of fecundating substances, the use of which, when separated, would not and could not produce the desired effect.

3. In the production of a very considerable quantity of factitious water, which, when combined with other ingredients, forming lees, furnishes the farmer with a fertilizing liquid, the commixture of which, in either vegetable or mineral substances, gives a manure of the richest kind.

4. In the production of a quantity of nitrate of lime and caustic potash; of ammonia and saltpetre—four substances which modern chemistry has found to contain the most fecundating properties possible.—*From the Albany Cultivator.*

Indian Corn.

Some of the advocates of the Corn Laws in England and in this country, are turning their attention to the introduction of Corn, or as it is called in that country, Maize, as an article of food for the laboring classes. A letter was recently published at the Albion office, believed to be from the pen of Dr. Bartlett, addressed to Lord Ashburton, on the importance of the corn and flour trade with Great Britain, via the St. Lawrence, and particularly on the advantages of introducing Indian corn. The writer is of the opinion, that this description of grain ought to be admitted into Britain, via the St. Lawrence, free; that it could be shipped at an average of fifty cents, and be laid down there so as to stand in less than $1 a bushel, one penny sterling per pound. So far as the export of the article is concerned, if it could be direct from the states, it would be of immense importance and advantage to both countries; and indeed, by the way of the St. Lawrence it might be sent very cheap. The Ohio corn, which is most abundant, might be shipped through this channel, to cost in England a much lower sum than the writer of the letter has named. That it would be the cheapest and most nutritious food, there can be no question; for it is ascertained, that one pound of Indian meal, properly cooked, will furnish a breakfast for four persons; and if we add milk, sugar, or butter, the breakfast will cost one half penny each meal for families and children. It is a little singular, how little is known in England of this most valuable grain, which is so extensively raised and used throughout this country. There, wheat bread is a luxury. The common people subsist principally on oat meal and potatoes. To show how little is known of Indian corn, the import for consumption into the kingdom from July, 1828, to December, 1841, 13½ years, was 1,188,232 bushels, while of wheat there was one hundred times that quantity, and of oats, about twenty-five times during that period. If the merits of Indian corn could be once known, and could be but partaken of by the common people of England for a short time, we have no doubt it would command a consumption that would be most beneficial to this country.

In the United States the quantity of maize consumed is immense, and in the proportion of about four and a half bushels to one of wheat.

The following are the returns of Indian corn produced in each State in 1839, by the United States Census.

	Bushels.		*Bushels.*
1. Tennessee,	44,986,188	17. Arkansas,	4,846,632
2. Kentucky,	39,847.120	18. New Jersey,	4,361,975
3. Virginia,	34,577,591	19. Michigan,	2,277,039
4. Ohio,	33,668,144	20. Delaware,	2,099,359
5. Indiana,	28,155,887	21. Mass.,	1,809,192
6. N. Carolina,	23,893,763	22. Connecticut,	1,500,441
7. Illinois,	22,634,211	23. Iowa,	1,406,241
8. Alabama,	20.947,004	24. N. Hampshire,	1,162,572
9. Georgia,	20,905,122	25. Vermont,	1,119,678
10. Missouri,	17,332,524	26. Maine,	950,528
11. S. Carolina,	14,720,805	27. Florida,	898,974
12. Pennsylva.,	14,240,022	28. Rhode Island,	450,498
13. Mississippi,	13,161,237	29. Wisconsin,	379,559
14. New York,	10,972,086	30. District Col.,	39,485
15. Maryland,	8,233,086		
16. Louisiana,	5,952,912	Total,	377,531,875

By this table it will be seen, that more than two-thirds of the crop of Indian corn is raised in the slave holding States—and of this quantity but a very small portion is exported. It is the great staple for the food of all classes, but particularly for the blacks, and also for animals. Indeed, in many of the southern States, scarcely any other description of grain is grown. Planters there say, that Indian corn at twenty-five cents, is better than cotton at eight cents.

The above table is a curiosity; it will be seen that New York is behind fourteen States in the culture of corn—very considerably behind Mississippi. The New England States stand very low in the scale—Massachusetts is even behind the little State of Delaware. Tennessee is the banner State. The production of that State exceeds that of sixteen other States besides. The aggregate yield is over three hundred and seventy-seven millions of bushels, which, at half a dollar a bushel, would amount to over one hundred and eighty-eight millions, sufficient to pay all the indebtedness of the States.—*N. Y. Express.*

Cabbages.

Editors of the Farmers' Cabinet.—We learn from a late number of the United States Farmer, that a Committee of the American Institute, recently reported an examination they had made last fall, of a field of cabbages of about twenty acres, on the farm of Lambert Wyckoff, at Bushwick, Long Island; which they found in a remarkably fine condition. From something less than an acre of this field, a dozen cabbages were selected, the average weight of which was twenty-four lbs. and three-quarters. From a bed of red pickling cabbage, half a dozen heads were selected, which averaged twelve lbs. and three-quarters. These were certainly fine specimens of this excellent plant, and as the Committee very properly observe, reflected great credit upon the gardener, Peter Hultz. But it was in Bergen county, N. J. that the lover of *Zour Krout* might look abroad over extensive fields, and promise himself never to fear a scarcity of his favorite luxury. The Committee say, the land in that section is very rich and fertile, being literally embedded with the shells of oysters. "So congenial is the soil to the growth of cabbage, that the roots of this plant are seldom attacked by insects, which prove so destructive in less favoured situations." After surveying the crop of Garret Vreeland, which they visited by invitation, the Committee took "a circuit of three miles around the southern part of Bergen township. In the course of this short ramble, 77½ acres, yielding more than six hundred thousand heads of cabbages, fresh, vigorous and thriving," came within their view. On Long Island they plant the hills about three feet apart each way, early in the spring:—in Bergen, where the soil is more fertile, they are planted but little more than two feet distant, thus giving from eight to ten thousand plants on an acre.

Now it appears to me, that the cabbage culture, when properly managed, and on soils that suit, and within a reasonable distance of market, must be a profitable one. In your own good city, they are always of ready sale, bringing from two to five dols. the hundred. They delight in a rich soil: indeed they will not thrive in any other. I remember the advice of an old Dutch neighbor, who said, if you would raise fine cabbages, put as much manure on the ground as you think will possibly do, and then go over it, and put as much more!

Grazing and raising wheat in this vicinity, have become but a dull business. Farmers in the interior, and in the west, on their rich virgin soils, and cheap lands, and with their increasing facility for transportation, can afford to drive our beef and wheat out of the market. We must look around, and see if our lands, may not here be more profitably appropriated to articles of a perishable nature, and yet of every day demand, which the distant agriculturist cannot supply.

These facts are stated, and these hints are thrown out by one, who knows something of the difficulty of growing profitable crops in the neighborhood of Philadelphia, and who is sensible, there is now full demand for all the shrewdness of the farmer. If he would make both ends meet, he must be wide awake. He must not settle down contented to raise the same identical crops that his father, and grandfathers raised before him—to *profit* or *no profit*,—but he must wake up to a new state of things, and study his location—the adaptation of his land to crops—and the demands of the market within his reach. Z. Y.

Compost and Liquid Manures.

Manures are the very sinews of agriculture; its food; its life-blood. To this matter the attention of most farmers cannot be too strongly directed.

It is generally conceded, that all animal manures have most efficacy when applied in the greenest state. They are then most active: and their chemical effects upon the soil are immediate and powerful. In a direct application to the soil, however, they cannot be very thoroughly intermixed; and on this account, without question, they are less efficacious than they would be, if uniformly distributed and thoroughly incorporated with the earth. To effect this object in the best manner, it is desirable to form them in compost heaps, with other substances; mud, scrapings of yards, scrapings of roads, sods, or decayed vegetable matters of every description; and even simple loam or mould, or any substance which will act as a retentive absorbent. Thus compounded, the liquids of the manure will be retained and the escape of the valuable gaseous effluvia prevented; and by being thoroughly and equally intermixed and diffused, the whole mass becomes a valuable and efficacious manure. The amount of manure in this way is greatly increased; and it is believed, that one part of green animal manure, combined in this way with two parts of mould, swamp mud, decomposed peat, and even some portion of clay, will prove quite as serviceable as if the whole mass were animal manure, applied in a raw and unmixed state. Some intelligent farmers maintain, that the proportion of animal manure requisite to impregnate a large mass in compost, is much less than I have allowed. This can be always favourably done in a well constructed barn-yard. The bottom of a barn-yard ought always to be kept well covered with loam or mud, or other matters to absorb the liquids of the yard. But it may often be done to advantage, where the manure on a field designed to be cultivated, is seasonably carried out and mixed with mould obtained from the headlands to form the heap, which being turned over and worked up once or twice, will then be fit for use.

There is another matter to which I invite the attention of farmers: that is, the saving of liquid manures. In the best districts on the continent of Europe, the liquid parts of manure are considered in every respect equal to the solid. There, provision is made for saving and compounding them with the greatest care, in stone and water-proof vaults, formed under their cow-houses. In our dairy districts especially, where large herds of cows are kept, a great amount of this manure might be secured by vaults, formed under the stalls, with spouts leading into them. With a view to the same object likewise, the cattle, instead of lying in the yards at night, should be always tied in stalls. If the barn is properly ventilated, and the stalls littered, they will lay as comfortably and securely as in the yards; and the saving of manure would much more than pay for any extra trouble which it might be supposed to involve. These are homely subjects, but as important as they are homely. Doubling our manures, is quadrupling our crops; and whoever will look with disdain upon a manure heap, is indifferent to some of the most wonderful operations of the economy of nature; and to the most remarkable and instructive lessons of philosophy.—*Exchange paper.*

Leaves.—Gather up leaves and put them into your hog-yards; also decayed vegetable substances of every kind. Anything that will make manure, is worth preserving. Look around your premises and see how much *you* can save in this way. Are there no old heaps of ashes, or refuse matter of any kind, encumbering your door-yards? no banks of rich mould to be converted into compost, to help the crops of the coming year?

Stones on Cultivated Land.

It is an error to suppose that stones should be entirely removed from land which is under cultivation. The stones which would be in the way of the scythe while mowing, of course should be removed, but all the smaller ones should remain; and if wholly or partially embedded in the soil, they preserve the moisture during a drought, and thus serve materially to increase the crop. The following article from the Gentleman's Magazine, published in 1773, is to that point:

"It has been long known to experienced farmers, that taking away very small stones and flints, is detrimental to ploughed lands in general; but more particularly so to thin light lands, and all lands of a binding nature. It was, however, never imagined that the damage could be so great, as it is now found to be, since unusual quantities of flints and other stones have been repeatedly gathered for the use of turnpike and other roads. In the parish of Stevenage, in Hertfordshire, there is a field known by the name of Chalkdell field, containing about 200 acres; the land in this field was formerly equal, if not superior, to most lands in that county; but lying convenient for the surveyors of the roads, they have picked it so often, and stripped it of the flint and small stones to such a degree, that it is now inferior to lands that were formerly reckoned not much over half its value, acre for acre.

"Nor is it Chalkdell field alone that has materially suffered in that county by the above mentioned practice; several thousand acres bordering on the turnpike roads from Wellwyn to Baldock, have been so much impoverished, that the loss to the inheritance forever, must be computed at a great many thousand pounds. What puts it beyond a doubt that the prodigious impoverishment of the land is owing to no other cause but picking and carrying away the stones, is, that those lands have generally been most impoverished, which have been most often picked; nay, I know a field, part of which was picked, and the other part ploughed up before they had time to pick it, where the part that was picked, lost seven or eight parts in ten, of two succeeding crops; and though the whole field was manured and managed in all respects alike, yet the impoverishment was visible where the stones had been picked off, and extended not an inch farther; an incontestible proof of the benefit of the stones."—*Exchange paper.*

Arrange your house in order due,
Your garden, gates, and fences too;
Neglect's offensive, and what's worse,
It helps to make an empty purse.

For the Farmers' Cabinet.

Agricultural Exhibitions.

Messrs. Editors.—Your correspondent Z. in his rejoinder, sets out with charging me with untruth: but, judging of intentions by acts, I am free to submit to your readers, whether his article in your November number, does not carry with it evidence of the design to injure the Agricultural Society, by impugning the motives of the committee of judges. It may be admitted, that at the last exhibition there were fewer persons on the ground than at the meeting of 1841, and fewer sheep exhibited: but the true causes of this falling off, were the terrible drought of the season and the dust on the roads, which deterred many from travelling and driving fat sheep and cattle to the exhibition; as also the destruction of the bridge over the Schuylkill, at the falls: that respectable farmer and regular contributor, Isaac W. Roberts, Esqr., of Lower Merion, made an effort to bring a few of his young stock by the upper bridge, which he repented before he reached the ground; while his large cattle had to be left at home. And then, the day of exhibition was unfortunately fixed for the day after the general elections of this State: consequently, many farmers at a distance who attended them, could not arrive in time the next morning, when the exhibition opened: and these causes were understood and spoken of on the ground at the time, to account for some of the stalls being empty. I have already stated, that the cause of Judge Longstreth's removing his cattle from the ground, was not in consequence of their being held exceptionable, for they were awarded premiums. Z. complains that I did him injustice in making him say, that there were cattle, on which the Society had heretofore lavished their premiums in the most extravagant manner: I am free to confess that I did, in chief, accuse him of censuring the Society for lavishing their premiums on some cattle most extravagantly: but how I did him injustice in this, I am at a loss to know. He also asserts, that the owner of Leander caused him to be removed from the ground immediately on the publication of the award of the second premium, declaring that he considered his bull disgraced by it—thus breaking through the rules of the Society, himself being one of the framers of these rules. Now, I know this to be untrue, as I am authorized by the owner to say: for the bull was not removed on the occasion, until taken home with the other cattle, late on the evening of the last day of the exhibition.

But I must not forget to say a word to Z. on his judgment on cattle: on this, if I mistake not, he will feel more sensitive than on any other point that I have touched upon. He seems to take great credit to himself, because he always held the Prince of Wales superior to Colostra, inasmuch as the judges so decided—why every boy who attended the exhibition when these two superior bulls were exhibited, took either side, Colostra or Prince of Wales; and they could not be wrong, both being so near perfection: but he ventures on an untried one—a bull that did not come to the ground, heralded as the "best bred"—"splendid," &c.: but one without character, as he was "without pedigree," as Z. declares. Here then is a fair issue on the judgment of Z. and I propose that the decision shall be left to any set of the judges—even to those who pleased him the most: and if they will say that the bull of his choice is the best, or even third or fourth-rate to another on the ground of the same age and at the same time, I will purchase it and make him a present of it. Or, if he does not like this, I will state another mode of deciding—they say, every thing is worth only what it will bring—now, the young bull which took the first premium at the exhibition, is held by his owner at not less than $1000; whether he can sell him at this, I cannot tell, but I am sure he is worth more to him than that sum, for his calves this season, will likely cover that amount: but the bull which was judged inferior to him, being awarded the second premium, sold on the ground, at private sale, for, I think, something like $400; while Z.'s favourite could have been purchased of his owner the same day—and can, even yet, if not sold—at something like $40! So much for Z.'s judgment in cattle. Culley.

Our intelligent correspondents, "Z." and "Culley," will excuse the liberty which we have felt obliged to exercise,—as an editorial privilege—that of curtailing a little redundancy. We hope they will admit that their articles are not weakened by it: but we are constrained to propose that the subject shall now be dropped. It would, indeed, be refreshing, were they to exercise their abilities on a topic on which all were agreed.—Ed.

Cure for Corns.—Take a small piece of flannel that has never been washed: wrap, or sow it around the toe:—one thickness will be sufficient. Wet the flannel where the corn is, night and morning, with fine sweet oil. Renew the flannel weekly, and at the same time pare the corn, and it will soon disappear.—*Leeds Intelligencer.*

On the Cultivation of the Raspberry.

The raspberry, like the strawberry and currant, and other small fruits, the gooseberry excepted, has been greatly neglected in its cultivation. Though common in every garden, and everywhere esteemed, next to the strawberry, for its rich and handsome fruit, yet few individuals have attempted improved methods of growth, by which the size, beauty, excellence and productiveness of the berries, may be increased to a much greater degree than they are generally seen in our gardens.

The raspberry is as susceptible of improvement as the strawberry; yet, while in the latter we have the beautiful Keen's seedling, and our own, (*Hovey's*,) variety, contrasting with such marked superiority over the small and inferior berries of the older sorts, the same varieties of the raspberry are now cultivated that were common 20 or 30 years ago, and they are still deemed the most desirable sorts. The same attention bestowed on this fruit, that has been devoted to the gooseberry, would undoubtedly have resulted in the production of varieties much superior to those at present grown.

The raspberry, like the strawberry, is a native of low and partially shady situations, growing in boggy or soft black soils, which allow its roots to strike deep, and throw up a free growth of its vigorous suckers. It is only in such situations, in their wild state, that the plants are found productive; on light and thin soils, and in high and exposed situations, the growth of the suckers is limited, and the fruit scarcely ever attains any size. Nature thus teaches the proper mode which the cultivator should adopt in the growth of the plants; and it should be his object to follow her, rather than to divert and thwart her in the course she has pointed out for us to pursue.

The plants are frequently set out in light and poor soils, crowded together, left untrimmed, choked up with a profuse growth of weak stems, and what little fruit they produce, nearly dried up, from the arid situation in which they are placed. On the contrary, in cool, deep, and moist soils, in a sheltered and partially shaded place, the plants throw up suckers to the height of six or eight feet, and produce a profusion of large, handsome, and well flavoured berries. So well assured are the most eminent English cultivators of the raspberry, of its love of a cool and moist soil, that some writers have strenuously recommended the use of bog earth and rotten leaves, in the place of the richest loam. We are well assured that the many complaints which are made of the meagre produce of many raspberry plantations, may be attributed wholly to the light and droughty soils in which they are often planted.

Situation.—A cool aspect is of material consequence; and to secure this, the north side of a fence or trellis, which will form a screen from the sun, is the most favourable: on the north side of a shrubbery, or row of fruit trees, is also a suitable place. If neither of these situations is to be had, an open spot in the garden may be chosen, always being careful to avoid the south or east side of a fence. A temporary shade may be effected in the open garden, by planting a row of running beans on the south side. Having selected a proper place, proceed to prepare the soil.

Soil.—A good soil is the most important requisite. Having marked out the size of the bed, if the earth is not naturally very rich and deep, preparations should be made to trench it. First cover the surface with three or four inches of bog earth, if to be procured, or, in its place, leaf soil, and if these are not conveniently to be had, good old rotten hot-bed manure, which has laid at least six or eight months: that from hot-beds made in April, will do for use in the following October, and if a portion of the bed was leaves, it is so much the more to be preferred. Having spread the manure upon the surface, it should then be trenched in, two spades deep, or about eighteen inches, placing the manure at the bottom of the trench. Level the surface, and spade in an inch or two more of the same kind of manure, and after allowing a week for the bed to settle, it will be ready for planting.

Procuring plants.—The success of planting out, depends considerably upon a judicious selection of plants. Suckers of all sizes are generally thrown up, and many cultivators would naturally select the largest: such, however, are not the best; those of medium size, neither too large nor too small, have the finest roots, and spread more rapidly than the others. In selecting, reference should be had to the roots rather than the tops.

Planting out.—Having prepared the beds and secured a sufficient number of plants, preparations may be made for setting out. A spade, a rake, and a garden hoe will be the proper implements to accomplish this. The bed being marked out, stretch the line across the bed, at the distance of two feet from the walk: commence on either side of the line at one end, by taking out the earth the width and depth of the spade; place in the plant against the line, and throw the soil out of the second hole to fill up the first: in this way proceed, until the whole bed is planted, treading the soil lightly around each plant; with the rake, smooth and level the whole, and the work is finished. The rows should be three feet apart, and the plants three feet apart in the rows.

Winter treatment.—On the approach of cold weather, it will be necessary to protect the plants for the winter. The best method of doing this, is simply to bend the branches down to the ground, and cover them with four or five inches of the soil. Some cultivators use leaves, and others coarse manure, but we believe nothing answers better than the common soil in which they grow.

Summer treatment.—As soon as danger of cold weather is over, which is generally the 1st of April, the plants should be uncovered, and a stake placed to each, to which the stems should be securely tied: the first summer, very little must be expected from the plantation, and only a few suckers will be thrown up from each plant; but by the second year they will be more numerous, and produce considerable fruit. As soon as the plants are tied up, proceed to level the ground, and give it a neat finish with the rake: the only after culture is to keep down the weeds and the surface loose, by occasional hoeings.

Autumnal dressings.—Enriching the bed at the time of planting, is not sufficient to keep the plants in good condition. The beds should have a dressing of two or three inches of compost every autumn. This should be laid on in October, and lightly forked in, bearing in mind that a mixture of bog earth, or leaf soil and manure, is better for the plants than all manure. This will encourage the growth of the roots, and in the spring, the suckers which are thrown up to form the bearing plants of the next season, will be much stronger.

Pruning.—The raspberry can hardly be said to need pruning, in the common acceptation of that term. All that is required is to shorten the most vigorous bearing stems, and to cut away the old wood after it has produced its fruit. The second summer after planting, the plants will throw up a quantity of suckers: if numerous and small, four or five of the best should be left their entire length; if large and strong, they should be shortened to four or five feet, and the superfluous ones rooted up, unless wanted to form new plantations.

As the raspberry is a rapid grower after it once takes hold of the soil, quantities of suckers will spring up, which, in the course of four or five years, will weaken the plants. On this account new plantations should be made every fifth or sixth year, and the soil trenched and renewed by the application of the compost already mentioned.

The raspberry is rarely attacked by insects. On this account, it requires very little care at the hands of the cultivator. As a market fruit, it is particularly worthy of attention, requiring less care than the strawberry, easier picked, and the finer sorts commanding a good price.—*Hovey's Magazine.*

For the Farmers' Cabinet.

St. George's Agricultural Society.

THE ST. GEORGE'S AND APPOQUINIMINK HUNDRED AGRICULTURAL SOCIETY, in Newcastle County, Delaware, met at Cantwell's bridge, on the 19th of October last, to attend their annual cattle show, and to have a ploughing match. But owing to the continuance of the drought, the ploughing match was deferred until the 10th of November last—the time for the Society's annual meeting.

The number of cattle and other stock exhibited, was much smaller than that of last year—owing to their bad condition, on account of the drought, which had destroyed the pasture on the upland. There were, however, a number of fine animals presented—and the premiums awarded as follows, viz:

HORSES.

To Mr. Andrew Eliason, for the best stallion.

To Dr. C. S. Green, for the best brood mare.

To Mr. Wm. Cleaver, for the best 2 year old colt.

CATTLE.

To Major Jones, for the best native bull, $3.

To Major Maitland, for the best native cow, $2.

To Major John Jones, for the best native heifer, (Mayflower,) Land-measurer.

To General Mansfield, for the best native bull calf, (Captain,) Land-measurer.

SHEEP.

To John M. Woods, for the best Leicester buck, Blacklock's Treatise on Sheep.

To James T. Carpenter, for the best Bakewell buck, Farmers' Cabinet, 1 year.

To John M. Woods, for the best pen of Leicester ewes, (six,) $2.

SWINE.

To James T. Carpenter, for Berkshire boar, $1.

To William Robson, for a sow and five pigs, $2.

BUTTER.

To Mrs. M. B. Polk, for the best fresh butter, butter-bowl.

On the 10th of November the Society met—elected its officers for the ensuing year, and held the ploughing match, which was postponed for that day. The following is the report of the committee, appointed to decide the merits of the different ploughs entered for the premium, viz:

The undersigned committee, appointed to award the premiums offered at the ploughing match, which took place this day,—report, that the following ploughs were entered, viz:

1st. Beach's Concave, No. 10, owned by Levi Ryan,—ploughman, Charles Carter.

2nd. Prouty's Centre-draught, No. 5, owned by Major John Jones,—ploughman, Richard Cochran.

3d. Beach's Concave, No. 9, owned by John Whitlock,—ploughman, William E. Riggs.

4th. Prouty's Centre-draught, No. 5, owner and ploughman, A. Snow Naudain.

The Committee feel great hesitation in awarding the premium to any one of the ploughs—the work of all having been so well done. Two of the undersigned think, however, the Beach's Concave, No. 9, owned by John Whitlock, and worked by William E. Riggs, has rather the preference for superiority of work, and therefore award it to this plough. The last named of the undersigned, dissents from his colleagues; being of opinion, that for neatness and precision of work, the Beach's Concave, No. 10, owned by Levi Ryan, and worked by Charles Carter, is entitled to a slight preference over its competitors. In justice to the Centre-draught ploughs, the committee are free to say, that they could not, in this instance, receive a fair trial,—as the proper working of them, constructed as they are, to run with wheels, requires more practical experience on the part of the ploughman, than either of the gentlemen who worked them had the advantage of. Besides, the alleged superior lightness of draught of these ploughs, could not be ascertained in the absence of that important instrument, the Dynamometer.

R. Mansfield, }
B. Caulk, } Committee.
D. Corbit, }

December 28th, 1842.

Never despair, never be idle, never stop *trying*. Resolution, energy, spirit and courage have fed many a family in times past, and will do it again in times future.

From the American Agriculturist.

The Grape and Strawberry.

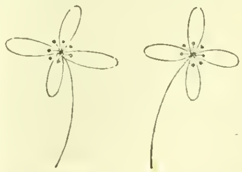
Cincinnati, Sept. 30th, 1842.

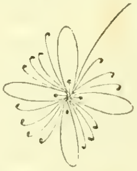
Gentlemen,—The vintage is over, and the expectations we formed in the spring have not been realized, from the rot among our grapes. The season has been cold and wet, and I did not anticipate a rich *must;* but in this respect have been agreeably disappointed. The juice is as rich as at any preceding vintage. I have thirteen vineyards, and more under way. The greatest yield in the county, is at the vineyard managed by Mr. Mottier, who is well known as an intelligent, enterprising vine dresser. He made within a fraction of 1500 gallons. A part of the vineyard that did not suffer by rot, yielded 600 gallons to the acre. The next vineyard in its yield, is under the charge of Mr. Myers, an intelligent German, of much experience in the cultivation of the vine, and its manufacture into wine. There were some vineyards in the county that produced a more abundant crop, on the same quality of ground, than even Mottier's. Mr. Hackinger had the finest crop I have ever seen. The crop of Mr. Reser, was also very abundant. I have been informed, that several other vineyards in our county were but little injured. The vine culture is yearly increasing with us, and the day is not distant, when the Ohio hills, between the two Miamies, will rival the same extent on the Rhine. For this, we shall be chiefly indebted to our German emigrants; and they are gratified in stating, that we can rival the wines of their own country. The Catawba is destined to make a dry wine, equal to Hock; and one of my German tenants, Mr. Lock, has made a sparkling wine from it, equal to the best Champaign. But we must not expect to succeed at first. The process of fermentation and manufacture of wine, requires both experience and skill, and we shall not, for years, equal the wine coopers of Europe in its manufacture. The dry Hock wines require but little experience and skill, but this is not true in respect to many of their finest wines. I propose this fall, to send samples of my wines to the Horticultural Societies of our principal cities, in the hope that it may tend to increase the culture of the grape.

You might benefit some of your readers by drawing their attention to the proper cultivation of the strawberry. In a late number of Hovey's Magazine, I discover that Mr. Allen, of Winchester, Virginia, takes exceptions to a remark of mine, that I have never met with an English gardener who understood the cultivation of the strawberry, though his own declarations in the next sentence, prove the truth of my observation, from his own want of information on the subject. I wrote to the Horticultural Society of London, on this subject, and drew their attention to it, about four years since, and discover that some of their late publications sustain my views. I do not state what I merely *believe*, but what I *know*, after twenty-five years' experience, that it is in vain to attempt the cultivation of the largest and finest varieties of strawberries, without regarding the sexes of the plants. In the Hudson, which is admitted to be the most valuable of all strawberries, it amounts to a complete separation of the sexes, and one acre of either alone, would not perfect a single fruit.

Hovey's Seedling, without male plants, is so defective in the male organs, as not to produce by itself, a perfect full-sized fruit. In the White and in the Monthly varieties, the male and female organs are perfect in the same blossom; but when this is the case, the fruit is never of the largest size. Wilmot's superb, and some other large varieties, are perfect in the male organs, and so far perfect in the female organs, as to produce some large and perfect fruit, with many small deformed ones. The female of the Virginia Scarlet, will not, by itself, produce fruit—its male will produce about half a crop, of small fruit. Mr. Allen appears to deem that my plan might answer, when the object is to raise a few strawberries only, (as he presumes we do in the West,) but would not do at the East, where the object is to raise 25 or 30 bushels. My tenants pay but little attention to the strawberry, and merely cultivate some between their grape vines, in parts of the vineyard, but one of them sells yearly, more than four times the quantity named by Mr. Allen. But we have some individuals that I presume may compete with any Horticulturist about Winchester. Mr. Culbertson sold from his own ground, in our market last summer, some days, 100 bushels of strawberries, principally the Hudson, and he was enabled to do this by his knowledge of the male and female plants, and his attention to the subject. I am truly surprised that Mr. Allen, or any other horticulturist, should doubt the principle, for it is not a new theory, originating with me, but learnt from an ignorant German female market gardener, who for thirty years, both at Philadelphia and in our own vicinity, had been celebrated for raising five times as many strawberries as her neighbours, from the same quantity of ground, and of much larger size.

On investigating the subject, I was surprised to find that Duchesne, Ehrhart, and Duhamel, and all botanical writers on the strawberry, since the days of Linnæus, fully sustained the theory and practice of the old woman, though I could not find a botanist among my acquaintance, aware of the fact. For years I could not from one-eighth of an acre, raise enough of the Hudson strawberry for my own family. I can now do it from one-tenth part of the ground. There is one variety of strawberry, and one only, that I am acquainted with, that produces large fruit, that is perfect in both the male and female organs. It is of the Pine-apple family, and came from the garden of Lafayette. There are but few who would admire the fruit. I send a sketch of the male and female blossom of the Hudson, which will equally apply to other varieties, though the same difference in the size of the blossom does not exist in all species or varieties. The most careless observer will at once discover the difference when the plants are in blossom. About one male plant will be required for ten of the female, and there will be a saving to have such males as will produce some fruit. I have a new variety from the prairies of Iowa, perfect in the male organs, and so far perfect in the female, as to produce a fair crop of very large fruit. I shall send some to Mr. Buist, of Philadelphia, Mr. Thorburn, of New York, and Mr. Hovey, of Boston, and shall, with pleasure, send plants to any person who would wish to procure them, if they have friends here who will call for and forward them.


Female Hudson.


Male Hudson.

The male organs are always attached to the hull, and the female to the stem. By separating the hull from the stem of the female, the male organs will be discovered, though not before perceptible; whilst in the male, they may be seen at the distance of 20 feet. I would recommend all persons wanting faith, to refer to Rees's Encyclopædia; article, Fragraria.

With regard, yours,
N. Longworth.

"For every evil under the sun,
There is a remedy, or there is none;
If there be one, seek and find it;
If there be none, never mind it."

For the Farmers' Cabinet.

Agricultural Address.

James M. Garnett, Esq., in an Address lately delivered before the Agricultural Society of Fredericksburg, Va., of which he is President, mentions the gratification he had received in visiting the farms of a number of his friends in the vicinity of Wilmington, Delaware. Among others was that of Dr. Thomson, consisting of about 600 acres, on which were kept from 80 to 100 cows, chiefly Devonshires. The Doctor has also 150 acres of peach trees, a fine body of meadow land reclaimed from the Delaware, and one of those fine commodious barns, for which Pennsylvania is so famous, and from which, our orator thinks many Southern farmers may read a lesson. After passing over several others, he says:

"The next farm I visited was Mr. C. P. Holcombe's. This gentleman was formerly a practising lawyer in Philadelphia, but is now, and has been for some years past, as my friend Dr. Thomson informed me, a zealous and active farmer. He gave me a truly kind reception, but such, in fact, met me everywhere that I went, and all seemed anxious to make my time among them pass off as agreeably as possible. Although Mr. Holcombe's farm, like the others I visited, appeared to be in a state of increasing improvement, my attention was attracted principally by his fine herd of Devon cattle, which, tâken altogether, were certainly the most beautiful animals of the cow kind that I have ever seen. The hair was in every case, of a mahogany red colour, whilst the skin of each that I examined, was of a golden yellow, which is said to be a sure indication of a good milker. This breed is preferred by all the farmers I met with, but I, myself, shall not undertake to express any preference, as it is a much "vexed question," and I might bring a hornet's nest about my ears, by taking sides, when, in truth, I have no pretensions whatever, to rank among the Cognoscenti, in such weighty and mysterious matters. With all possible deference, however, I will venture so far as to say, that such Devons as I saw on Mr. Holcombe's farm, came much nearer to my idea of beauty in the Bos Genus, than any thing I have yet met with."

Again, "from Mr. Higgins' farm, mynext visit was to Mr. Philip Reybold—a self-made man, of whose general success in all his agricultural operations, I heard much from every gentleman with whom I conversed on the subject. He, himself, lives on a large farm, and has four or five sons and sons-in-law, living near him, on farms which are said to be in a high state of improvement. Such seemed to be the condition of Mr. P. Reybold's own farm. A large portion of it appeared to be well set in grass, on which was grazing a flock of one thousand Leicester sheep in fine order. They yielded, at their last shearing, (as the proprietor informed me,) an average of eight pounds of wool to each fleece. Mr. R. derives much of his revenue, at present, from an immense peach orchard, which I there saw in a very flourishing condition; although, I cannot avoid thinking that the Delaware farmers are pushing this matter somewhat too far. It is true, that they make enormous profits of a "hitting year," (as it is called,) but then, so far as I could learn, this *hitting year* does not occur oftener than about once in five years, which reduces the average annual profits from peaches, to at least an equality with the profit arising from other sources, if not below them. Of course, it is well worth calculating whether it is good economy to give up so much land to peach trees; from which land the owners receive nothing else, but partial crops of corn and potatoes, whilst the trees are young. This remark is applicable to ourselves, as well as to the farmers of Delaware; for it inculcates caution in regard to all new sources of revenue from land; and will save us, if we pay due regard to it, from incurring the danger of loss by too hastily adopting any of them.

"My last visit was to Mr. Edward Tatnall, a wealthy, and apparently excellent practical farmer, who resides just beyond the Northern limits of Wilmington, on a farm, upon which I noticed more fine highland grass than I saw on any other. But the great object with all whose farms I visited, seemed to be, to get their lands well covered with grass as soon as possible, and there was much of it on all of them. Such, indeed, should be the object of every Virginia farmer, for grass constitutes the basis of all agricultural improvement. The Delaware farmers sow, generally, a mixture of red clover, orchard grass, and timothy, but prefer a mixture of green grass and white clover to any other. This is the common growth of their grass lands after they reach the highest state of improvement, and a pasture of it is deemed far better than any, either of what are called artificial, or natural grasses; indeed, the green grass and the white clover may well be styled natural grasses, for they spring up spontaneously, wherever our lands are made very rich.

"On Mr. Tatnall's farm I saw one of the largest and best of those fine barns already described. It was of stone, and cost, as I understand, about three thousand dollars—but this price, I am confident, would not be thought extravagant by any good judge, after examining all its numerous advantages. These are so great, that I should think few Virginia farmers would long be without similar buildings, of suitable sizes for their respective farms, if they would take the trouble to make even a rough calculation of what they annually lose, for the want of them. But so little are we yet in the habit of making any such calculations, that very few, comparatively speaking, appear to be aware, that *to save from loss*, is *actually to gain*, and with as much certainty, too, as by any other means."

Again; "during my short sojourn with Dr. Thomson and his amiable family, I visited twice, the little establishment of Mr. Wm. Webb, for making sugar from corn-stalks. The operation commenced with sanguine expectations of success on his part, but unfortunately, the mill for grinding the stalks, broke on the second day, and marred the whole business. A sufficient trial, however, has been made to render it certain, that very good sugar may be made from corn-stalks, and at the rate, as Mr. Webb appeared very confidently to believe, of 800 or 1000 lbs. to the acre, of well improved land. The juice, as tested by the sacharometer, is two-tenths stronger than the juice of the Louisiana cane. This information I received from a Mr. Morgan, a sugar planter from that State, who had come to Wilmington to witness Mr. Webb's experiment, and left it with the determination to make the trial next year on his own farm. He ascribed Mr. Webb's failure to the fixtures being on too limited a scale, the whole having cost only about $300; whereas, Mr. Morgan thought it would require about $800 to purchase all that would be necessary, including a much stronger mill than Mr. Webb's, to carry through the experiment fully and completely. Notwithstanding Mr. Webb's failure, I feel very confident, from what I have seen, that he will ultimately succeed, and that a few years only will elapse, before the making of sugar from corn-stalks, will become common in every State in the Union. I, myself, have seen and tasted both the boiled juice and the sugar. The first—when clarified—forms a very rich, clear, fine coloured syrup, and the latter cannot be told, either by the looks or the taste, from good cane sugar."

After leaving Delaware, he visited the Horticultural exhibition in Philadelphia, where he learned "two facts in regard to grapes and sweet potatoes, that are worth publishing; to wit:—that the first may be kept perfectly sound and sweet, until mid-winter, by putting them into tight boxes or kegs, in alternate layers, with bats of carded cotton between them; and that the latter can be equally well preserved by putting them into a warm, dry room, without any other covering. Some potatoes which had been thus kept, I myself saw, on the 21st of September, just as good, to all appearance, as others that were fresh dug, and the gentleman who exhibited them, assured me that he grew them last year, and had done nothing else to preserve them."

This distinguished "Virginia farmer," and zealous friend of agriculture, closes his interesting Address, with a forcible appeal on behalf of general and universal education—to *all* important—to *none*, more than to the farmer. L.

Cure for a Foundered horse.

As soon as you find your horse is foundered, bleed him in the neck in proportion to the greatness of the founder. In extreme cases, you may bleed him as long as he can stand up. Then draw his head up, as common in drenching, and with a spoon, put far back on his tongue, strong salt, until you get him to swallow one pint. Be careful not to let him drink too much. Then anoint around the edges of his hoofs with spirits of turpentine, and your horse will be well in one hour.

A founder pervades every part of the system of a horse. The fleams arrest it from the blood: the salt arrests it from the stomach and bowels; and the spirits arrest it from the feet and limbs.

I once rode a hired horse 99 miles in two days, returning him at night the second day; and his owner would not have known that he had been foundered if I had not told him, and his founder was one of the deepest kind.

I once, in a travel of 700 miles, foundered my horse three times, and I do not think that my journey was retarded more than one day by the misfortune, having, in all the cases, observed and practised the above prescription. I have known a foundered horse turned in at night on green feed; in the morning he would be well, having been purged by the green feed. All founders must be attended to immediately.—*South-western Farmer.*

FOR CRAMP IN THE STOMACH.—Warm water sweetened with molasses or brown sugar, taken freely, will in many cases remove the cramp in the stomach, when opium and other remedies have failed.

From the Maine Farmer.

Keep accounts with yourselves.

Two neighbours purchased, each a farm, lying side by side, of equal size and goodness, as to buildings and everything. Each had a wife, and were equal as regards family. When they had purchased and paid for a small stock, a horse each, and their farms, they had nothing left, but just enough to buy a few farming tools, which they did.

Their health and age were equal; so with their wives and families. One of these individuals kept an accurate account of his expenses, income and outgo, which he cast up at the end of the year. He found that his expenses were more than his income, and said to his "better half," "This will never do; if we go on at this rate, ere long we must be ruined. We must make our tea and coffee a little weaker, and not buy quite so many articles not absolutely necessary. We will then see how it stands next year, for if we go on for a few years as we did the last, it will be too late; we shall get so far into debt that it will be in vain to try to get out, without selling our farm." The wife, good woman, looked over the account, and perceived where she might have done a little different. The next year's account showed that their income was some more than their outgo. Thus it continued, and they became independent.

The other neighbour kept no account—knew not that his expenses exceeded his income the first year—his good lady did not know it,—so they went on for a few years, until they became so involved that the farm was mortgaged, and there was an end of it, for they never could, of course, redeem it. One thousand dollars have thus gone, whereas, had they known how they were going, by taking a different course, economizing a little, not laying out so much for apparel, food, &c., &c., for a few years at first, they would, like their neighbours, have become independent.

Promises ruined one, while he kept no account; the other took care what he did, how he promised, and went on without being blindfolded. The poor wife would have done as the other did, had her husband kept an account, as he ought, so that he might have given her the necessary caution, and told her how their affairs were going on. Had both proceeded alike at first, they might have spread a little more sail afterwards. Both families were equally industrious, and of good habits; the difference was, one only seemed aware that a small leak would sink a large ship if not stopped in season.

How many merchants, and even mechanics, have failed by not taking an account yearly, of their goods, debts, demands, &c.; whereas, if they would only have been content to live within their income for a few years, then they might spread sail and purchase estates that it would not do for them to purchase on first setting out. "Behold how great a fire a little matter kindleth." If all would do as the successful individual above, bankrupts would be scarcer, and honest men who trust those who keep no accounts with themselves, would not so often suffer.

J. S. B.

For the Farmers' Cabinet.

Poultry.

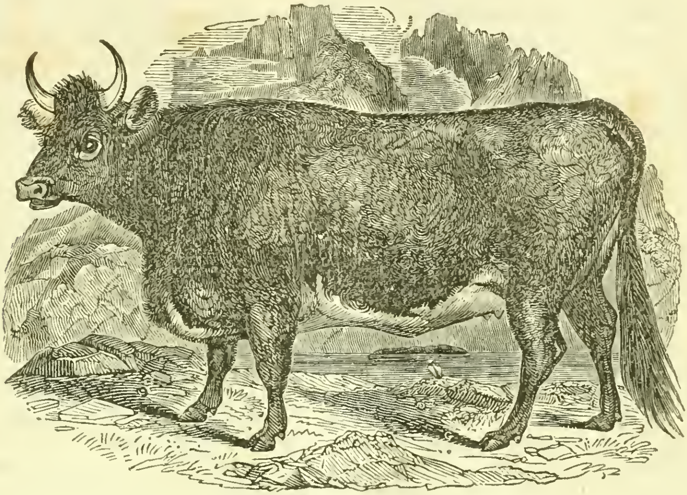
It has long been observed, that poultry never does well, unless it is taken under the especial charge of the female part of a family: and an observing person once remarked, that it required the same kind of treatment that young ladies are wont to receive, viz.: to be kept clean, dry and warm, to be generously fed with nutritious food, and to be comfortably lodged; to be attended by a young, handsome, sprightly, active, gallant beau, who will call them up at an early hour in the morning, and wait upon them at breakfast, and invite them to partake of the nicest titbits; and furthermore, to walk with and attend upon them in their hours of recreation during the day, and to watch and guard them during the period of repose.

If the above requisitions are faithfully attended to, an abundance of eggs and plenty of chickens, will reward the care and attention of the industrious and careful housewife. There should always be a storm house provided for poultry, with a southern exposure, to which they could retreat in time of storms or showers of rain, and where they could nestle and do their toilet in the dry earth or sand, and make themselves comfortable and fit to be seen, when they go forth to seek food or recreation.

Hens like privacy when they retire to their nests, either to lay or to set, and they should be indulged in their predilections in so reasonable a matter, and proper arrangements accordingly made to carry them out.

Z.

The Ayrshire Agricultural Association, at its last meeting, determined upon the purchase of a Flemish stallion, for the purpose of improving the breed in Scotland, the Society being convinced that there is a much better breed of draught horses in Flanders than in any part of Great Britain.—*Boston Cultivator.*



THE WEST HIGHLAND COW.

In our number for October, we gave the portrait of the Kyloe, or West Highland Bull; the above is a very correct likeness of the cow of that most valuable and highly esteemed breed of cattle, which inhabit those mountainous and other exposed pastures of Scotland, on which, almost all other races would perish. Although these cattle are known as "Black cattle," many of them are of various colours, one of the most favourite, being the whitish dun, equally hardy with the perfect black, and considered preferable for her milking properties; often, too, she is found handsomer, and exhibiting more desirable qualities for the grazier, being what is called a "kind handler." The breed is small, but well proportioned; and on those farms *which are let on leases*, they are carefully tended and better fed; when they attain a much larger size. Here, the cows are sent, during the summer, to the glens and moors, which are covered with hard grasses and rushes; because that portion of the farm which yields the softer and sweeter grasses, is not sufficient for their consumption during the whole year. They are attended by a woman from each family, who has a small hut for her habitation, and who makes the butter and cheese which their milk affords. The cows are thus kept in comparatively good pasture, during the summer and autumn, while the young beasts are sent to the moors; and towards the winter, all the cattle are brought to the lower grounds, and the steers are separated and housed at night, being fed on a small quantity of hay and straw, portions of which are distributed to the other cattle during snow.

The cattle of the small tenants are all housed at night, during the winter, and fed on straw, coarse hay, and the refuse of the family meals. The habitations of these people are usually divided into three apartments; the first, which occupies half the hut, is the general entrance, and contains the agricultural implements, poultry and cattle. The second, comprising a fourth of the hut, is that in which the family reside; and the inner one, of the same size, is the sleeping room and granary. There are no chimneys; the smoke fills the whole hut, and escapes partly by a hole in the roof, partly by the door, and partly by orifices formed between the wall and roof, as substitutes for windows, and which, in stormy weather, are closed by a bundle of straw. The fire is placed on the middle of the floor; the soot accumulates on the roof, and in rainy weather is continually dropping; and for the purpose of obtaining it for manure, the hut is unroofed in the beginning of May! The dung of the cattle, which had been accumulating during the winter and spring, and had been mixed with straw, ashes and other matter, is at the same time removed from the outer apartment. In the spring these cattle are in the most wretched plight, when sea-weed boiled with husks of grain and a little meal, are then employed to support them; while in many places, the cattle, during the winter and spring, betake themselves to the sea-shore to feed upon the fuci, thrown up by the receding waves. *The milk* of these cows is said to be excellent, but on account of the filthy habits of these cotters, the butter and cheese are eaten by few besides the natives.

For the Farmers' Cabinet.

Low Prices.

Messrs. Editors,—For the first time in my life—now a pretty extended period—I have this day sold a fine fat hog, weighing 100 pounds, for 3½ cents per pound; receiving for it just three dollars and a half! Which, as it was of real, pure Berkshire blood, is a less sum than I was offered for it at six weeks old. We are, indeed, fallen upon eventful times, and are tempted to ask, first, what has caused the before unheard-of depression of farm produce; and second, what will be the end of it? Now, as I live in a retired part of the country, and see but little of the world, and hear less of it, except on market days, I suppose I am not expected to know much about it, except that "such things are;" and yet, when one is made to feel so severely, and to smart under such an infliction as that which now oppresses us, it is but natural that we should complain, and then it is but reasonable that we should be able to say what ails us.

You must know, then, I purchased the small place which I now occupy, eight years ago: it was then almost in a state of nature, and for the first four years I had enough to do, to "clear my teeth," as the saying is; but when I had any thing to sell, I obtained a fair price for it, and got forward, although it was by slow degrees: but after four years more of hard labour, and now that I am able to raise better crops, the prices which I am compelled to accept for them, brings me back to the state of destitution which I suffered at the first, without the hope that by my exertions I shall ever be able to overcome my difficulties. I may be wrong, but it strikes me that one cause for the very low prices of agricultural produce is, the over supply of our markets; for unless I am much deceived in my powers of observation, there were not such enormous quantities of produce brought to the markets eight years ago, as now. And this brings me to assent to the doctrine, promulgated by what are called "Political Economists;" that "the low price of labour in Europe, is caused by the glut of that *material* in the market." If this be so, I see no probability of things growing better; for the preference which is at present given to agricultural pursuits, fostered by the numerous periodicals and other works which are continually springing up around us, serves to increase the evil, by propagating the notion, that no other employment is at all comparable to that of husbandry; while the high prices paid for agricultural labour, add to the difficulty, by enabling every industrious man to become a landholder, whose only chance of success is sought in the further supply of those articles, with which the markets are already filled to excess. To particularize—the land adjoining me, which has heretofore remained a waste, 500 acres in extent, has just been purchased by a person hitherto engaged in business in the city. His object is, to cultivate roots, cabbages, &c., and breed hogs and poultry on a very extensive scale, depending entirely on Philadelphia for a market for his produce; and he informs me that many of his acquaintances will be soon compelled to follow his example; remarking, their habits of life in the city have entirely unfitted them for a distant residence. And if to this be added the facility offered by rail-roads and canals, to pour in the produce of lands once quite out of the reach of the sea-board; with the continually increasing stream of emigrants from foreign countries, whose grand resource is agriculture—how, in the name of "Political Economy," are times for the farmer ever to mend? Some, to whom I have applied for a solution of the difficulty, are of opinion, that the prices of land and labour must fall; but will not this add to the pressure, by inducing a greater number of farm labourers to become land-holders, and grow food for themselves? It has been proposed in the Cabinet, that various articles should be grown, other than those that are now furnished for the markets.—Well, this might stave off the difficulty for a time, but soon every demand will be supplied, and competition will again reduce the price below the cost of raising—witness the article of castor oil, which once brought six dollars a gallon, but is now supplied for sixty-two and a half cents!

Since writing the above, an old and venerable neighbour has looked in, and in answer to the inquiry, Will things ever be better for the farming interest? said, "I once was young and now am old, yet have I never seen the righteous forsaken, or his righteous seed begging their bread." As in all other things, so in the business of agriculture, there will ever be ebbing and flowing; have you so soon forgotten, how that a few years ago, the people ceased to eat beef, because the price was so high that few could afford to purchase? when pork was 14 cents per pound, and flour 8 or 10 dollars per barrel? I remember when I was a young man, the price of wheat in the old country was so low, that a neighbour of ours determined to build a granary for the purpose of stowing away his crop until the price should rise; but all the people laughed, and assured him that wheat would never again be higher—it was then 62 cents per bushel—but he reasoned as I now do, and before a year had passed, he had sold his grain for a price additional, sufficient to pay for his new building; since which, I have known the price of wheat to be five dollars a bushel. Let us therefore not despair, but hope; and things will some time or other come round of their own accord: depend upon it, we have still far more to be thankful for than we deserve, and the reflection should keep us humble and confiding."

My venerable friend has relieved my mind of a load of anxiety. I have no more hogs to sell, but I have six in pickle, and a beef to slaughter. My health is good, and I have a blessed wife and four dutiful children, with food in store for a year. My wood-house is well filled, and my chimnies never smoke. I have a capital lard lamp and a small library of books; and subscribe and pay for the Cabinet, and two others of our best agricultural journals. I have a chest of tools for a rainy day; shelter for all my cattle, and provender for the winter; with a well of as pure water as Adam ever drank of—a real Jacob's well, from which "I drink myself, and my children, and my cattle." A church not distant, which serves for a school during the week; and a pastor for my minister—one who is as ready to weep with those who weep, as to rejoice with those who do rejoice; fulfilling also the duties of a physician to the body, as well as the soul! I fear, indeed, that *I* have far more blessings than I deserve, and the thought shall henceforth keep me "humble and confiding."

"Truly, the lines are fallen unto me in
pleasant places;
Yea, I have a goodly heritage!"

JOHN DORSAY.

Schuylkill county, Dec. 3d, 1842.

For the Farmers' Cabinet.

SOAP SUDS.—There is no better manure than dirty soap suds; and there is not a farm house in the country, but what produces enough of it in the course of a year, to manure a garden, two or three times over. Dirty suds, after washing, is almost universally thrown into the nearest gutter to be washed away and wasted. Would it not be an improvement, and show a laudable economy in the good woman of the farm house, to have it conveyed to the garden to enrich the ground, and make the vegetables grow more luxuriantly? The pot-ash, the grease, and the dirt, all of which are component parts of soap suds, are first rate manures, and should always be applied to make plants grow, and especially when hard times are loudly complained of, and sound economy is the order of the day. C.

From the Massachusetts Ploughman.

Dry wood, or Green wood—which gives the most heat?

I WISH to say a word on the article of fuel. I frequently, in the papers, read an article by some theorist on the advantage of seasoning wood for the use of a family; it is frequently stated that there is more heat in dry, than in green wood;—in some kinds of wood it is evidently the case, as in white pine, poplar, and some others; but with sapling oak, as far as my experience goes, I contend that there is more heat in it when green, than when dry, especially if seasoned out of doors. Frequently I have had wood dried out of doors, particularly old frow oak, that would not burn near so freely as green, taken directly from the stump.

The sap of trees is composed of something more than water, as it is frequently supposed. This is evidently the case with the sap of the rock-maple, the pitch-pine, the fir, &c. For instance, cut two lots of wood, coal or char one when green, and let the other dry before charring. The coal from the green wood will be as much heavier, as the green wood was heavier than the dry, and will substantially heat in a blacksmith's fire, as much more iron, and spend as much farther as it is heavier than the other. Of this, I am able to speak from experience; now, if the sap was nothing but water, this, I think, could not be. I have tried wood almost every way, and by experience I prefer the following as the best economy for the poor. The rich may do as they please.

Select one third, and never one half dry, for unless you have a bad stove indeed, you can cook equally as well, and be as comfortably warmed, and save one quarter of the expense. Every man that can, should season his wood under cover, as its value is much increased thereby. *True economy is the wealth of the nation*, and it should be the pride of all our pursuits, the pillar of our domestic happiness; for it makes the most of our means for supplying our own wants, and for being useful to others. It is truly the poor man's wealth and capital.

Yours, &c., S. P.

A CENTURY ago, poor Richard, to whom we are indebted for much valuable instruction, said, that "He who hath a *trade*, hath an *estate*, and he who hath a *calling*, hath an *office* of *profit* and *honour*."

This, like all other truths, hath lost none of its good qualities by age, for truth never spoils by keeping, and a thousand years hence, it will be no less true than at the present time.

For the Farmers' Cabinet.

Application of Manures.

Messrs. Editors,—It is really surprising to see the attention that is beginning to be paid to the subject of manuring; and if to this principle could be added, the *more important* one of pulverization, and the necessity of a change of crops be understood and acted upon, our labours would be one half lessened, and our crops be one half increased, with the greatest ease and comfort to ourselves. In reading a late treatise on agriculture, I have been highly interested and instructed by the following observations, and conceive they would be found of great importance to your readers, if you could afford space in your publication for their insertion. The author observes:

"The application of the same kind of manure to plants or trees that occupy the soil for more than one year, is not always advantageous, nor does the land prove so productive, as might often be expected, from the labour and pains bestowed. The advantage of variety, is, greater fermentation—consequently, greater benefit from the air and rains; for the same manure operates on the soil, especially if it be not aided by cultivation, like the same medicine, or the same food or air on the body, which are found to lose their best effect after too long repetition. This is not exactly the case with arable land, because of the variety of crops and of careful *cultivation*, which is the most powerful means of all, as it admits of the application of the same manure for ever, with the same success. But it is proper to observe, an *excess* of manure, particularly when put on in a raw state for the coming crop, is as injurious, as when the land is permitted to become poor from the want of it; for of *fertility*, there may be named three descriptions; as first, *extravagant* fertility; second, *productive* fertility; third, *apoplectic* fertility. The first is, when so early and rapid a decomposition takes place, that the plants thrive too fast in their youth, and then, towards harvest, they have nearly or quite ceased to grow, without perfecting their seeds: this is commonly called winter or spring *proud*, and summer *poor*. On examining the stalks and leaves, they will be found to be covered with rust or fungi. The healthy secretions are at an end, and fermentation of the juices succeeding, a gas is formed which bursts the vessels of the plant, and fungi make their appearance. The cause of this *extravagant* fertility is this—the grain was sown on fresh or recently manured land, and the result is, the crop receives its food directly from the manure in the first instance, and of course, in an unselected, undiluted state, instead of disengaging it from the *soil*, with which the particles of the manure had been lightly combined by previous cultivation; for the fresh manure decays faster, and forces itself upon the plants beyond what they naturally and immediately require, and being aided in its decomposition by the vegetative powers of the grain, a too rapid growth is at first brought on; and then, as the plants have been induced to commence their structure upon a large scale, by the abundance of the materials afforded them, they require a proportioned greater quantity of the same materials to maintain and complete what they had begun; but from the two-fold cause of an early extravagance and large structure, they find those materials deficient at the very time when wanted the most—at the formation and completion of the seed: the *soil*, all the time, from its poverty—not having the manure properly mixed and distributed by cultivation and oft-repeated stirring, effects but little towards the growth of the plants. Therefore, out of the two sources of fertility, namely, manure and cultivation, the one most important, namely, cultivation, having been neglected, fails of its supply, and disease of the plant necessarily follows.

"The cause of the second, or *productive fertility*, is owing to a regular decomposition going on, within the reach of the roots of the growing plants, when food is yielded sufficiently fast to meet all their necessary demands, and continues thus from the beginning to the end; when a well matured crop is formed, with bright straw, a handsome plump sample, and in quantity proportioned to the native fertility of the soil: this favourable result being attributable to the crop being able to disengage its food from the particles of the soil, with which it had been combined by previous good cultivation and exposure—a fallow process. The beneficial consequence of this is, the plants have to exert their own decomposing and selecting energies to obtain the food they require, and therefore, *take up no more than what their healthy vegetation demands;* instead, as in the former case, of having their vegetation impelled on, as it were, by the too rapid and overwhelming self-decomposition of the manure.

"The cause of the third, or *apoplectic fertility*, is owing to a too rapid decomposition taking place throughout the growth of the plants, as is the case with grain growing on a dung-hill: they are seen to flourish away with uncommon vigor, as if in a state of intoxication, producing foliage by wholesale; and if standing in masses, are soon eat down by the wind and rain; when, the raw becoming broken, the sap is then im-eded in its flow through the vessels, which re already overcharged with half-concocted od, forced into circulation by the too rapid ecay of the manure beneath: the conse-uence is, the bursting of the vessels; and the grain ever ripens, a lean, half-formed evel is the only product.

"To show the value of perfect tillage;— field of good land was manured and sown ith wheat; its appearance during winter, ring and summer, was very fine; but hen reaped at harvest, the straw was soft nd the grain of little value. The owner of e field was persuaded to fallow the land, though he conceived it was sufficiently rtile, and not requiring such tillage; how-ver, he had recourse to the fallow, and en sowed wheat again; the produce amply paid the expense, for the crop yielded ore than 48 bushels per acre—a proof of e superiority of cultivation, over a coat of anure without it. The process had mixed nd combined the manure with the soil, and d restored its chemical powers; and there-re the succeeding crop drew from its re-urces, *now rendered healthy*, in exact pro-rtion as it required the food."

The foregoing observations are invalua-e—they are so plain that the man who ns, may read; and they must carry con-ction to the breast of every one who is t blinded by prejudice. I have now be-re me, the result of a single extra plough-g and working, in a double crop of the est turnips. I had well dunged a field r sugar beets, which I planted after once oughing, calculating that I could loosen e earth by means of the cultivator, in the ter working of the crop; but I found the ants so poor, that I determined to plough em up; well harrow and pulverize the nd, and sow it with white turnips. This lid, and have never before gathered a crop all comparable to it for quantity and ality; the bulbs are certainly heavier and oser than any that I ever grew before; d I now perceive the rationality of at-buting the superiority of the turnip in gland, to the very careful cultivation be-owed upon it; the land being ploughed e times, and repeatedly harrowed and lled, by which it is completely pulverized; d the weeds are encouraged to grow, to turned under by the plough; thus ridding e land of five crops of weeds before sow-g the turnip crop. But, "can this ever y?" I am confident that it can, and will.

JACOB HEINZEL.

Allentown, Dec. 20th, 1842.

For the Farmers' Cabinet.

Subsoil Ploughing.

SUBSOIL ploughing, which has attracted the attention of farmers for a few years past, and has been attended with successful results, it seems was put in practice in Maryland, in 1822, as will appear by the following extract from the American Farmer, of April, 1823.

"This is to certify, that in breaking my land for corn last spring, (about 60 acres,) I followed the barshare plough, with a substratum, (subsoil) plough, until I had broke about 25 acres. I believe the average depth of my ploughing with the barshare, was about five inches. That the substratum plough, worked about seven inches deeper, in the same furrow; making the whole 12 inches deep. That otherwise, in the planting and tillage, the management was just the same, and the land of about equal quality throughout the field. That the corn on that part, where the substratum plough was used, grew about twelve inches taller, kept its colour through the season, and produced at least 50 per cent. more corn. That the corn on the other part of the field, suffered very much with the drought, and fired considerably. "JOSEPH DELAPLAINE.

"Montgomery county, Md., Feb. 18th, 1823."

It is hoped the above successful experiment, together with similar results within the last year or two, in other situations, will induce more farmers to try their hands at subsoil ploughing the coming spring. The trials, so far as they have been heard from, confirm the good results that were anticipated from stirring the subsoil, without bringing it to the surface, as is the case in trench ploughing. The subsoil plough introduced by Prouty, is a very perfect agricultural implement, and fully answers the purpose for which it was constructed. He has them manufactured, adapted to one, two or three horses, to suit circumstances. They would be a valuable thing to rouse up a garden with. They are nothing more than a plough without a mould board, rather narrower and higher than a common plough, and can be made by any common plough maker.

Quere—would not subsoiling be capital in potatoe ground? X.

WOUNDS AND BRUISES ON HORSES.—Take one quarter of a pound of saltpetre, half a pint of vinegar, half a pint of spirits of turpentine; put them together in a bottle, and shake up before using. Apply it to the wound with a feather, three times a day.

For the Farmers' Cabinet.

Cultivation of Corn.--Dialogue founded on fact.

C.—It is easy for persons who are not engaged in the practice of Agriculture, to direct those who are, in the most eligible mode of employing their labour. I wish they would be kind enough to tell us what crop we could raise that would be of ready sale, and yield a living profit—*just that*—I, for one, should be infinitely obliged.

E.—That crop, I believe to be corn.

C.—Yes: that is the crop for which there is always sale, at a fair price, and one that produces fodder for the support of stock and the production of manure; but unfortunately, there is a little item in the account, which those who are ignorant of its cultivation, are apt to overlook: it is only *this*, that corn cannot be grown year after year, on the same land.

E.—What would be the result, if corn were grown every year on the same land!

C.—Simply, "a coming out of the *leetle* end of the horn."

E.—And yet, I am willing to encounter your ridicule, by proposing such a step.

C.—Are you serious!

E.—Never more so.

C.—Well, then, say on.

E.—I will, if you please, take your four acre upper field, by way of illustrating my plan, as that field was in corn the last year, and cultivated by the plough; by which the soil was thrown into beds five feet wide, with deep furrows between: the corn standing in the centre or middle of the bed. Are you willing that I should commence operations?

C.—Most willing.

E.—Well then, I will immediately throw into these furrows the sides of the beds, by which, considerable ridges will be formed between them: these will lie, until the time for planting, when I will split them by means of a double plough, and in the *furrows* so formed, place compost, prepared for the purpose from bog-earth and stable manure, well decomposed by frequent turning and mixing during winter; then return the furrows, by which the compost will be buried, and plant the corn, throwing up the remainder of the old beds at my leisure, by means of the plough; which operation will leave a furrow exactly where now is the crown of the ridge —this operation forming my first working of the corn. My second working would be, merely to turn these beds *back*, by means of the plough, going within one furrow of the corn: and my third and last working would throw these beds to the corn by the plough,
so to lie until the harvesting of the cor
The crop would then stand on the centre
five feet ridges or beds, with deep furrow
between them. as last year: the order onl
being reversed—what was then the *furro*
being now the *ridge*. This plan would n
prevent me from sowing turnips broadca
on these ridges at the time of laying by th
corn, nor would it be attended by any inco
venience, other than precluding the cros
working of the crop; a circumstance of n
importance. as I would plant the hills thre
feet apart only. in the rows. and clean the
by means of the hand-hoe, a labour wit
which I would debit the crop. So soon a
the land is cleared in the autumn, I woul
turn the sides of the beds or ridges into th
furrows, so to lie and take the benefit of th
winter frost, rain and snow; split them i
the spring; again manure with compost
return them, and again plant the corn. An
this I would continue. if you please, for a
age to come. Thus, the land designed f
the next year's crop. would be fallowed an
effectually worked the present season; an
every year the corn would receive a hea
dressing of composted manure. which woul
not, however. prevent me from top-dressin
the hills with plaster. or sprinkling the su
face of the beds with ashes, &c., as a ma
nuring for turnips; calculating, that suc
dressing would be sure to pay me 40 pe
cent. on the cost. Now, after a couple
years with such management, I would b
glad to be told where the weeds and th
grubs are to come from! I calculate tha
one would be *rooted* out. and the othe
starved out: the weeds contained in th
dung of the compost being turned so dee
as not to vegetate. and the grubs having n
grass to feed upon: with their eggs, if the
had any. destroyed by a winter's exposur
by being turned up in the autumn. Wel
now, what do you say against this mode
management!

C.—Oh. nothing: only I should like
have the footing up of the account.

E.—Well, and to this I should not hav
the slightest objection.

C.—But to be serious: what foundatio
have you for believing that such a mod
would be attended with the results whic
you predict! I confess. to me the plan
novel. and one that I should hesitate to fo
low:—have you any experience of the a
vantages which you expect so confidently
arise from its adoption!

E.—Not exactly: but reasoning from ana
ogy. I should say the thing must work; f
only listen to what Jethro Tull says in h
"Horse-hoeing Husbandry," on the cultiv
tion of wheat on the same land, for man

successive years. "In a certain field, there s now growing the sixth crop in succession, very promising, although the land has had no sort of dung to any of these crops, or in several years before: the last crop—the fifth —the best of the whole. In another field, it was found that a third crop in succession yielded 48 bushels per acre, although it occupied but one-fourth part of the ridges, which were six feet wide, three rows on each. I have often weighed the produce of sown crops of wheat, (i. e. broadcast,) but never found them equal to the best of my drilled crops, although mine have been raised on land, noted as the poorest and shallowest in the neighbourhood; but here the crop enjoys all the earth; for between he last hoeing or ploughing, and harvest, here remains nothing but space, empty of mould, in the middle of the intervals, which, f wide, we can raise a good crop with less abour, less seed, no dung, no fallow; the ast ploughing being given as deep as the taple of the soil will allow; turning the urrows towards the crop, so as to leave a deep, wide trench in the middle of each in-erval. I have numbered 109 grains in one ear of my wheat, which was eight inches ong; and there is no year, when an ear of ny wheat does not weigh more than two of he sown ears, taking a sheaf together." Now what more can be said?

C.—Well, perhaps nothing; and I confess feel half inclined to practice what you ave been preaching.

E.—No one has so fair an opportunity; he deep furrows between the 5 feet beds of our upper four acre field—now considered n eye-sore—offering the means of a fine xperiment. J. P.

Philadelphia, 21st January, 1843.

Native Stock.

It seems to be a principle recognised, that attle degenerate with a change of climate, with few exceptions; accordingly, every dis-rict in England has its peculiar stock, which s generally the native breed improved by ju-icious selection. So valuable is acclimation, that the judicious breeder seldom dis-ards the native stock, but builds upon it by areful selection and crossing; and poor as ur native stock of cattle may appear, we re little aware how much of that appear-nce is owing to indifferent keeping and bad management, or what vast improvement may be effected by a more judicious course. We once knew a physician in a country ractice, who had a fine eye for a cow, and who, when he met with one that pleased his ancy, would purchase her, perhaps for eight or ten dollars, and by judicious keeping and management, increase her milk from a quart, to several gallons at a milking; she then became the wonder of the neighbourhood, and was soon purchased by some less judicious person at a very high price; another was purchased in her stead, showing the same result. And this person, who was a man of great observation and judgment, and devoted to agricultural pursuits, often declared his conviction of the ability, if his professional engagements permitted, to raise from our native cattle, a stock for the dairy, equal to any that could be imported. The fact is, that for producing a good stock of our own, the material is not so much wanting in our cattle, for nature everywhere affords favourable specimens of her work; we only require more information and discernment amongst our breeders. What avails it to advise the best selection by the best individuals, if they are ignorant of anatomy, and of points indicating the qualities to be desired?

Cattle are used for three purposes; as oxen for draught, as producers of milk, or for the food they afford as beef. There are certain points of form giving activity and endurance to the ox; there are others, indicating a milking propensity in the cow, and there are others again, denoting a tendency to convert food into fat; the marks of each are certain, and easily understood by observation and study, but they no more come by *nature*, than do reading and writing. We then advise our farmers to make themselves acquainted with these points of form, by resorting to the best works and obtaining the best advice they can procure on the subject; let them select a certain number of our native cattle, according to the information they shall obtain, and keeping them in the best manner, let them select from their offspring those individuals only, as breeders, having the points they have learned to esteem; every year they will find the produce coming nearer their standard of perfection.—*Union Agriculturist.*

The first element of good farming, is deep and thorough tillage, and complete pulverization of the soil.

The second is copious manuring; adapting the kind, quantity and quality, to the previous state of the soil and the probable wants of the crop; bearing in mind, that no crop can thrive and prosper, without a full supply of nutriment adapted to its nature.

The third is, to suffer no intruders to sit down at the table, and partake of the feast intended for your especially invited guests, and which you wish to treat most kindly.

For the Farmers' Cabinet.

The Worm Fence.

Messrs. Editors,—There is an article in your last number, which will be of more value to the readers of the Cabinet, than their subscription money for that work since its commencement: I allude to that on fencing, a business which is becoming of more importance to us every year that we live. The Address of the President of the Philadelphia Agricultural Society at their last meeting, placed the importance of the subject in a very conspicuous point of view, and left us to regret the *necessity* of the evil—for few, I believe, will ever entertain the idea, that it would be expedient to throw open our fields, as in France, without a fence as boundary—that would be to retrogade with a witness—at the same time, it is readily admitted that a great portion of our permanent fence might be done away, were the practice of temporary fencing, as in England, to become general. But the "Old Farmer of Salem county," steps in, and points out a way to reconcile both parties; teaching us how to save thousands of dollars, and add an elegance and neatness to our farms that will, I conceive, in the end, prove of still greater importance, for I am one of those who believe that the morals of a country are indebted, in a considerable degree, to "good roads and neat fences." Your last number, therefore, had not reached me half an hour, before I had a model-fence under way, planned according to directions; the proportions being one inch to a foot; and in a surprisingly short space of time, I had finished nine panels of the most elegant fence that I ever saw, whether of "worm, post-and-rail, or quick;" the form being a *wave*, rather than a *worm*, and uniting the qualifications of strength and beauty, in a very eminent degree. But in process of erection, I think I have made some improvements upon the method described in the Cabinet, which I beg to state, for the information, and if I mistake not, for the advantage of your readers generally.

In the first place, then, I find that a *worm* or *angle* of 3 feet, is sufficient for the purpose of perfect strength; producing an elegance of curve, far more pleasing to the eye than the straight fence, for any situation, and requiring but very little more ground space than it: while, at that angle, the loss in the length of rails in a panel of eleven feet, is nine inches only; a fact, which would scarcely be credited, were it not proved by demonstration. But in the directions given in the Cabinet, there are some things which, I think, can be improved upon; for it must be very difficult to bend the rod of iron at the stone and clinch it over the bottom rail, if the rod be of a size to give sufficient strength to the fence, without shaking and injury to the work; neither can "an inch and a half" of bar be sufficient length for the purpose. And then, what is to keep it in its proper place on the stone, unless that be broad, in proportion to its height! Now, in my plan, I have overcome this difficulty and objection, by merely letting the iron rod into the stone about an inch and a half, and fixing it there with melted lead; a labour and expense not worth the naming, when compared with the service rendered. It seems to be intimated also, that a panel at a time can be finished; but it will be found that the rails must follow each other singly for a considerable length of space, before one panel can be finished, as the ends o them must lap one over the other—but this is of no importance. Not so, however, with the proposal to clinch or bend the rod over the top rail—a work which I should deem almost impossible, without destroying the fence by shaking it to pieces. And then, in the event of any of the rails failing, or a wish to remove or repair the fence, how are these clinchings to be raised up, without breaking them off, and injuring the fence Now, for this trouble and difficulty, I have substituted the very simple plan, of punching a key-hole within half an inch of the end of each rod; and when the top rail—which should be stout and half round—is placed, I shall procure a piece of iron hoop say six inches in length, punch a hole in the middle of it for the reception of the end o the rod; insert it, and drive a key through the hole and clinch it; and then bend the ends of the hoop to fit exactly, and embrace the end of the top rail. Thus, I have a fence, erected in a much shorter time than would be required for the fixing a post-and rail fence, that can be removed in a quarter part of the time; and the first cost canno be one half as much; while the insertion o the rods into the stones will constitute it one of the strongest that can be devised; as the angles, acting on the principle of the arch present a resistance that cannot be over come by any common occurrence.

"Oh! but the expense of all this!" I hea some one exclaim. True, but I am one wh care not what I give for a thing; the only question is, what can I sell it for? But le us see what the extra expense would amoun to. Drilling the holes in the stones I shal not allow a charge for; every farmer and hi servants can do this at "odd times," by put ting all hands upon it; they can also mel the lead and pour it into the holes; whil e cost of the lead will be paid, in the ngth of bar saved in the clinchings: so at the only extra charge will be the punch-g of the rods, which may amount to about cent each, if done by the hundred: the ıys may be cut out of the clippings of ıeet-iron, to be obtained for asking for, of e sheet-iron workers, as they need not be ore than half, or three quarters of an inch ide. The hole in the piece of iron hoop ıould be made to embrace the rod as closely s possible; thus the rod, as well as the rails the holes, will be protected from the rain, hich would otherwise pass in at the hole ıd descend through the whole length of ıe rod; a saving this, of the ends of the ıils, to the amount of many times the cost ' the iron hoop, which ought to be wide ıough for this purpose, as also, to add rength to the end of the top rail, which it made to embrace; they may be obtained the old iron cellars for a very trifling ost; and punching them, will only form a leasant recreation to the farm boys at their odd times."

Unless the stones are of considerable thick-ess, I would advise a block to be put under ıe first rail; and before placing the top rail, block of sufficient thickness to raise it to ıe required height for pinning or keying own tight upon the iron hoop, must be sup-lied; this will require care and a little ractice, but neither art or much labour. Vhen the fence is finished, the top rail ught to range so as to form a perfectly evel line; and this is to be obtained by see-ıg that the tops of all the rods are of the ame height, before placing the first rail. It s needless to advise, that these blocks of vood be of the most lasting and enduring ature, and not liable to split. And I would ake the present opportunity to urge upon our readers, the great importance of cut-ing all wood designed for fences, and in-eed for every other purpose, in May; strip ff the bark and split it to the size required, nd expose it to the sun's rays, by setting it n end. I have long satisfied myself, that uch timber will last—*how many times onger I can't say*,—but I went some time ıgo to see a post which had been cut in full eaf, and placed in its position in the revolu-ionary war, and there it remains, firm and ound at the present day; and at the same ime I brought away portions of a part of a ence, which had already stood out two other ets of rails cut in the autumn and winter—*'hat* having been cut in May or June, and placed immediately in fence.

I would add, in conclusion, the *wave* fence is admirably adapted for the erection of shelter for stock in the field; it is but to insert a rod through the rails of two panels, near the point of an angle, passing it through the ends of other rails, inserted between them; directing them out from the fence and bringing their other ends to within three feet of each other, to form a door-way or entrance for stock; and there you have a comfortable angle for shelter, which might be made impervious to the weather at the sides, by wreathing the branches of cedar, &c., through the interstices of the rails. It would be necessary to strengthen the fence at the door-way, by putting down a stout post at each side, to which the rod could be made fast by carrying a piece of iron-hoop round it and the post; at that end also, a block must be inserted between each rail, as will be perceived and understood. J. P.

January 24th, 1843.

For the Farmers' Cabinet.

Sow grass seed liberally, and not grudgingly.—The low price which clover seed is likely to be the coming spring, should promote a more liberal use of it; one of the greatest errors which many farmers have fallen into, has been that of sowing grass seeds too *thin*. One seed produces but one stalk, and though when the leaves are expanded, the ground may appear well covered, yet when it is mown or pastured, the roots will show themselves too remote from each other for good neighbourhood or profit. It not only materially affects the quantity of pasture or hay, but when the sod comes to be turned down, if it is not well and thickly set with roots, there will be a great loss in the succeeding crop—for a good sward turned down, is a substantial manuring in itself, and generally produces a good crop of corn. "A thin sward, a poor crop of corn—a good thick sward, a big corn crop,"—says my neighbour Thomas; what is your experience in the matter?

It will be a fine opportunity in the spring to try the experiment, which has been successfully tried already, by some of the best farmers in the country, of sowing clover seed plentifully with their oats; top-dressing the following winter or spring, with barn-yard manure, and then ploughing down for wheat towards autumn, as was recommended some months back in the Cabinet. Those farmers who have six or more fields, or enclosures, can put this plan to the test of experiment, without difficulty or danger of loss. O.

To Preserve Flowers.—Be careful not to press the flowers too hard at first, and change the blotting paper frequently, to absorb the moisture, increasing the pressure as the flower dries.—*Eng. Pub.*

For the Farmers' Cabinet.

Agricultural Reports.

The Committee appointed by the Philadelphia Society for promoting agriculture, respectfully report, that after making the most careful examination of the crops of those who notified them, and became competitors, they make the following award of premiums, viz;

For the best acre of Lucerne, to James Gowen, of Mount Airy, the premium of $10.

For the best three acres of rye, to James Gowen, the premium of $10.

For the best five acres of corn, to Henry Chorley, of the Scott Farm, the premium of $10.

For the best two acres of potatoes, to James Gowen, the premium of $10.

For the best acre of ruta-baga turnips, to James Robinson, on the farm of the late Lewis Clapier, Esq., the premium of $10.

For the best half-acre of carrots, to James Gowen, the premium of $8.

For the best quarter-acre of sugar parsnips, to James Gowen, the premium of $6.

The Committee were particular in attending to all calls made on them for the purpose of viewing crops—the good appearance of which, gave general satisfaction; and they have to regret, that there should have been so few competitors, when so many more might have entered the lists. Mr. Isaac W. Roberts's field of wheat,—Mr. Helmbold's, and others—Mr. Samuel Rogers's lot of ruta-baga turnips—and Mr. Chapman's field of rye, were all deserving of great praise, for their good cultivation and promise of abundant yield.

The Committee would have been much gratified, had these gentlemen given them an account of their products.

The condition of the farm of Mr. James Gowen, was highly interesting to the Committee; the great regularity of the crops, their cleanliness and fine appearance, gave strong evidence of good management on the part of the proprietor.

The statements of the different competitors will be laid before the Society, giving an account of the cultivation of the different crops, and their yield.

Aaron Clement,
Isaac W. Roberts, } Committee.
Henry Chorley,

January 28th, 1843.

To the Committee on crops.

Gentlemen,—In compliance with the rules of the Society, I beg leave to present a statement of some of my crops, viewed by you
1842, and for which I claim premiums, v

Lucerne, one acre.—Sowed 15 pounds
seed to the acre, with spring grain, on t
26th of April, 1841. It was one of the m
unfavourable springs for seeding, in my
collection; this, with the grain that crowd
and shaded it overmuch, prevented its *s*
ting as uniformly well, as I could ha
wished. The soil light, rather sandy, a
is part of an old orchard—some trees rece
ly removed, and some still standing. It w
in, the previous year, with mangel wurzel
was of course, well ploughed. Had a dre
ing of cow-stable manure, well rotted, mix
with scrapings of the yard, harrowed in b
fore sowing. Last season it afforded thr
several cuttings of plants, from 2½ feet t
feet high. It was of great service to me
soiling, and I have hopes it will yield
well for several seasons to come.

Rye.—A field of some 20 acres. T
had been a thicket in my Woodland farm,
Cheltenham township, Montgomery coun
Its aspect in 1838, when I undertook to s
due it, was truly frightful.—I never beh
any thing of the kind so uniformly clo
The unshapely junipers, cedars, scrub o
briars and sheep-berry bushes, were so m
ted together, that it seemed as if nothi
could thread it, except something in t
shape of a bird or rabbit. It was well kno
as the best lodge for rabbits, in all the cou
try—and many a contra blessing have I h
bestowed on me, by a certain class of hop
ful citizens, for depriving them of a share
the bounties of nature, on which they h
depended, and to which they consider
themselves entitled, by prescriptive right.

The grubbing was a formidable job, a
the ploughing, from the roots and huge fl
stones that obstructed, was vexatious in t
extreme. It tried both the temper of t
ploughs, and the ploughmen. But after t
first ploughing, as should be, there were
further difficulties, nor never will be wi
me, after a first ploughing. For two se
sons I applied no manure, except lime, a
lime ashes. In these periods I sowed oa
and grass-seeds, and rye and grass-seed
turning down the stubble every fall—t
crops, of course, were light. But in t
fall of 1841, when I had the soil somewh
disciplined, I treated it with a genero
dressing of a compost, from stable manu
dirt and ground bones, to the value, includi
carting, of about $400, lightly ploughed i
and on the 20th of September, began to see
with rye and orchard grass—finished see
ing on the 27th—and in due time the follo
ing spring, added clover. Now, I looked f
a crop, and you have seen that I was not d

ointed. The rye, in some quarters of the d, has been estimated at 60 bushels to the e, and at not less on an average, than 50 hels; but from the best calculations I can ke, there being but a small part of it yet eshed, I put it down at 45 bushels to the e. The grass and clover are uncommonly ll *set*, and will yield, no doubt, a splendid p next season—while the straw I have on id from the rye, is the cleanest and most y of any I have ever had in my barn. e soil is light and loose, inclining to sand, xed with mica.

can hardly describe to you the pleasur- e sensations I felt, when, last fall, I be- d a portion of my beautiful young cattle, ulging in the luxuries this now splendid ld afforded them; some were feeding, and ne ruminating, laying on their soft grassy ich, from which, when they got up, you ild distinctly see their mould in the grass l clover, that had cradled them. The iquest and possession of kingdoms, could t have afforded such pure delight as filled e at that moment, when congratulating 'self on the conquest of the thicket in the ods.

Potatoes.—Four acres of mercers, in drill; o acres of which were planted on the side a hill, on the 16th of April—the other two res on the table land, on the 30th of April, both manured alike, with the exception, it on the *long litter*, raked in on the seed, fore the plough, of the second planting, ere was scattered a small portion of gyp- m. In gathering on the 29th of Septem- r, the product of two rows, thrown out by e plough on opposite sides of a land, was $\frac{1}{2}$ bushels,—at the rate of $8\frac{3}{4}$ bushels to e row. There were 102 rows in the two res, including two wing rows, equal to ne row. Then 101 rows at $8\frac{3}{4}$, give 883 ishels, or $441\frac{1}{2}$ to the acre. This, for Penn- lvania, may seem incredible,—and had u not seen them, and had they not been irly measured, I should be unwilling to re- rt it;—"But seeing is believing." The oduce of the first two acres, was 515 ishels. The whole patch was but once ghtly dressed with the plough, and once oroughly with the hoe-harrow. This was l the working they had—it was strictly eld culture, but then it was done in earn- st, to suit the soil and the season.

I have often thought it a reproach to us, iat the New England farmers should so far cel us in raising crops of this root; and is was the more moving to me,—a native the land of potatoes—and I determined take the field, and not quit it till I had convinced them I was no indifferent competitor.

Carrots.—One acre and five perches—yield of the whole patch, 772 bushels. Thirty-six rows sowed on the 7th of April, at 18 inches distance;—these, of course, had to be worked by hand;—length of rows, 240 feet, making one rood and eight perches;—the yield, 270 bushels—equal to about 900 bushels to the acre.

Sixty-seven rows, two feet apart, sowed on the 29th of April;—two roods and thirty-seven perches, field culture;—product. 502 bushels—equal to 686 bushels to the acre.

Sugar Parsnip.—Sowed latter part of April—1 rood 22 perches. Product, 309 bushels—equal to 749 bushels to the acre. It is not necessary here to state the mode and expense of culture, as these were given in detail in former communications, published.

Of Turnips.—Though you saw a fine crop for the season, I decline presenting it for premium, believing James Robinson, on the Clapier farm, raised a heavier crop of ruta-baga;—of this, I had occular demonstration, and shall here take leave to make a statement for him, which, perhaps, he might neglect to do, and thereby lose his chance of premium, by not complying with the rule. Having been called upon by Mr. Chorley, in the absence of two of his colleagues, who could not attend, we fixed upon the 17th of November to view this crop. The day proved the wettest of the season; but as farmers, like sailors, are born for all weathers, it did not discourage us. The committee, Mr. Chorley, Mr. Scott, and myself, viewed the patch of about four acres—measured the length and distance of the rows, which showed 712 feet, by two feet six inches;—requiring $24\frac{1}{2}$ rows to make an acre. We directed that a bushel of the roots should be gathered from a row, designated, as a fair sample of the whole;—the space taken out, was 36 feet—equal to 490 bushels to the acre. The soil was light, such as is called isinglass, in our neighbourhood. The manuring, consisting of stable and butcher's manure, was rather heavy. Had less been used, and a portion of its value put on in lime, it would have made a better and a more profitable crop, and left the land in better condition for spring seeding. He deserves, however, great credit for the manner in which he did the work—they were both clean and regular throughout. It was a beautiful patch of turnips, and should be regarded as a great crop, considering the excessive drought of last fall.

Having nothing more to communicate of interest to the cause,—I remain,

Very respectfully,
Your obedient servant,
James Gowen.

Messrs. Aaron Clement,
Isaac W. Roberts,
Henry Chorley,

Committee of the Philad. Soc., for promoting Agriculture.

To the Committee on Crops.

Gentlemen,—In compliance with your notice, I proceed to give you an account of my corn crop on the Scott farm, North Penn Township, Philadelphia county. I hauled on the lot, in the month of April, 20 large cart loads of good stable manure, per acre, which was carefully spread and ploughed in; the ground was well harrowed, and the rows marked out, 4½ feet from each other; the corn planted from the 5th to the 7th of May—the hills 3 feet apart in the row. After the corn came up, it was dressed with bone dust, to the value of $15. The culture in all respects, was similar, and not more expensive than usual in the neighbourhood, with those who raise fair crops. The five acres produced 375 bushels, or 75 bushels per acre. The soil was light, and the situation of the land was high, with a south exposure. The latter part of the season was very dry, or the crop would have been more abundant.

Respectfully, yours,
Henry Chorley.

To Messrs. Aaron Clement,
James Gowen,
Isaac W. Roberts,

Committee on crops, oppointed by the Philadelphia Society for promoting agriculture.

January 31st, 1843.

European Agricultural Tour & Survey.

Several gentlemen, interested in the advancement of agricultural science and improvement, and of rural education, have proposed to Mr. Henry Colman, late commissioner of Agricultural Survey of Massachusetts, to visit Europe for these objects. The plan is for him to spend a year in England, in the examination of the husbandry and rural economy of that country, and a year on the Continent, in the examination of French, Flemish, Swiss and German husbandry, and especially the Agricultural or Manual labour schools and the Experimental farms.

It is thought that such an examination, as yet never undertaken by an American, m if well conducted, essentially conduce t advancement of agricultural knowledg improvement in this country, and espec serve the cause of rural and practical cation, which is now exciting great int throughout the United States. The ger plan of the Survey, will conform to Colman's Survey of the Agriculture of sachusetts. The Royal Agricultural So of England, in publicly tendering to Colman a welcome reception, will wit doubt, essentially aid his labours.

It is proposed to publish his reports in cessive numbers. The first number is pected to appear by the 1st of January, 1 and sooner if practicable. The rest of numbers will follow in convenient suc sion, at intervals of two or three month

The whole work will be comprise eight, or at most, ten numbers, of at 100 pages each, handsomely printed i octavo form, stitched and covered, and bellished with necessary and useful d ings and engravings, title pages and in

The cost will be 50 cents each numbe subscribers. Gentlemen who subscribe, understood as subscribing for the whole w

As the enterprise involves of necessi large expense, it is expected that one d per copy, will be paid on subscribing otherwise, one dollar on the delivery of first number; one on the delivery of the cond number; one on the delivery of fifth number; one on the delivery of seventh number; and one on the delive the ninth number, should the work be tended to ten numbers.

Mr. Colman will leave for Europe, as as the subscription will warrant the un taking.

An early return is respectfully reque of gentlemen to whom this is sent, addre to Henry Colman, Rochester, N. Y.; to tle & Brown, Boston, Mass.; to Charle Francis & Co., No. 252, Broadway, N. or to Luther Tucker, Cultivator office, bany, N. Y.

October 4th, 1842.

If husbandry is made respectable, a ought to be, it will serve to check one of greatest evils that bear now heavily u the community—the rush of our young into the learned professions, which are ready filled to overflowing; especially of the Law, which, under the present wret ed course of legislation, of making litiga cheap, is starving this once honourable most useful profession.

For the Farmers' Cabinet.

Magnesian Lime.—"The Golden Plough."

Messrs. Editors,—I am now convinced, that while this controversy is creating discussion, it is convincing no one; but I should be uncourteous, were I to dodge the questions put by your correspondent, Isaac Wayne Vanleer. His article, if designed only for the gratification of the common reader, would require no comment; but if it is designed as an attack against the use of Lime as a fertilizing agent, and as such, addressed to your intelligent and enlightened readers, who can trace the history of its application and virtues, he has "reckoned without his host;" and, in point of agricultural science or knowledge, appears before them in rather an unenviable position. He cites his own experience; but this may be accounted for, by supposing that his soil already contains a sufficient quantity of the carbonate of lime; and like many other soils, not "easily improved," or being unfriendly to the action of mineral agency. The analysis of Professor Johnston, as given in my article, he states, "proves nothing;" but it *did prove* magnesia to be a constituent of wheat and other grain in a considerable proportion, and as such, was, in reply to B. Webb, unanswerable. Your correspondent asserts, "they do not use or apply magnesia in Great Britain!" Now, as I can quote from no higher authority, I would refer him to a valuable work recently published, the author of which is Professor Ure, "on the arts, manufactures and mines" of Great Britain: the following sentence is emphatic. "On account of the superiority of magnesian lime, the farmers of Fifeshire, Scotland, haul it vast distances, and prefer it to any other." The quantity of lime and gypsum applied to the acre in Great Britain, it is well known, compared with our practice in the United States, is more than quadruple. In England, 300 bushels of lime and six of plaster, are an average allowance for the most productive districts; and when the minerals were first used there, the quantity was not more per acre, than we now use here. And we would inform friend Van Leer, that clover, plaster, stable manure, &c., are as highly valued, in conjunction with lime by us, as they can be *without* lime, by him—they are all auxiliaries. On account of plenty of rich stable manure furnishing the different alkalies and salts, we agree at once, that there will be enough of the elements of fertility to keep and improve the strength of the soil, without using a particle of lime; and I can point to any number of farms, as productive as "Townsend's," which are naturally rich in carbonate of lime; and if not, by feeding fat horses and plenty of fat cattle all the year, and plenty of clover growing, these furnish the very essence of fertility. But when we name a soil of primitive formation, wholly destitute of organic remains, it is a different matter: on such soils, after a plentiful application of stable manure, good crops of grain and grass are grown, and may be continued by repeated applications of the same; but if the supply of manure be stopped, the growth of clover invariably fails soon after also; but not so, after an application of lime; the clover then will continue to grow and keep up the fertility of the soil. By this means barren tracts are renovated, when sufficient stable manure is not accessible, by a coat of lime; and *indirectly*, by the growth of clover.

Sir H. Davy states; "amongst a number of various specimens of lime-stones presented to me by Lord Sommerville, for analysis, one specimen, marked by him, 'particularly good for land,' proved magnesian;" and by experiment, from a few perches of good clover, he proved an acre of clover to contain about four bushels of lime and plaster, or carbonate and sulphate of lime. Phosphate of lime, or burnt or crushed bones, is also a powerful fertilizing agent, the base of which is, of course, lime. I would just add, so far from magnesian lime "not being used in England," according to Davy, magnesian limestone abounds, and magnesian lime is used in Somersetshire, Lancashire, Derbyshire, Shropshire, Durham and Yorkshire; all among the best agricultural districts in England.

I know an old man who, for the most part of his life, was as much opposed to liming as friend Van Leer; he was proprietor of a small farm, which he kept well stocked, and made sufficient manure to keep it in high order; but enlarging his domains by the purchase of adjacent lands, which he farmed without increasing his stock of manure, he soon found his soil deteriorate and his clover diminish; as a last resort, he eventually put on lime, and lived to regret an important error of opinion, which he said came unfortunately too late for him, but he trusted his sons would avail themselves of the advantages of lime, and be admonished by his obstinacy. But your correspondent patronizes the agricultural press, which will, I trust, dissipate the cloud which seems now to obscure him: his prejudice against lime reminds me of the late J. Randolph, of Roanoke, whose opposition against the wool-growing interest, during the operation of the tariff, was such, that he said in a speech in Congress, "he would go a mile out of his way to kick a sheep!" A Lancaster County Farmer.

Pequea, January 23d, 1843.

Manures.

"Many a mickle make a muckle."

Scrape up the droppings from your cows in your avenues and door-yards. Get together the rotten chips and bark from the wood yard. Collect the rich soil which accumulates in the holes and corners around the house, the barn, the hog-pen, and all out-buildings. If these materials are not wanted for immediate use, make them into a compost heap.

Have some expedient, also, for saving from the unfavourable action of rains and sun, what your cows drop in the barn-yard during the summer nights. Covering the bottom of the yard with loam or muck, will preserve the greater part of the liquid secretions; but the solids will lose much of their worth, if not daily covered with the soil or muck. Where the barn is airy and has a cellar under it, we recommend keeping the cows in the barn every night of the year. They suffer no discomfort, and we know of no other way in which so much and so good manure can be obtained from them.

Also, have materials at the side of the hog-yard constantly, so that something may be thrown in every two or three days for the swine to work upon. Throw in not *too* freely, however; there is a limit beyond which it is not profitable to fill up the yard. For it is not true, that every thing which finds its way within the four walls that confine the pigs, is immediately converted into good manure. We believe that two, or two and a half cords is as much as one hog will ordinarily manufacture *well* in the space of twelve months. By occasionally putting in lime, ashes or stable manure, the quantity may be rendered somewhat more than this. But while we caution farmers against reducing the quality *too much*, we earnestly call upon them to be careful to furnish the swine with *enough* of the raw material.

You have been so often told that *manure—manure—manure* is the one thing needful for successful farming, that it seems almost an insult to say it again—and yet it is so true and so important, that we do say it. We tell you to collect and save and make *manure—manure—manure*. We would write this word over the doors of your hog-pens, your barns, your privies; near your ash-holes, sink holes, and every other spot where the article can be manufactured. We would send you to the road-side, to the woods, to the sides of stone walls, to peat meadows and muck holes, for collecting matter to be converted into this essential article. We would send you *now*, as soon as the planting season is over, and would have you collect as much as possible. It were well to have years' supply always on hand in heaps. Thus placed, it would be constantly improving; and if thrown over once or twice in a year, the fermentations and decompositions it would undergo, would greatly enhance its fertilizing properties, even before it was handed over to the cattle and swine. Make manure; little by little, from day to day, will swell to a large pile in twelve months.—*N. E. Farmer.*

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

Philadelphia, Second Month, 1843.

Henry Colman, President of the Monroe county Agricultural Society, will please accept our thanks for his recent Address, at its Annual Cattle Show and Fair, in Rochester, N. Y., on "The improvement of Agriculture, as an Art and a Profession."

We have read this Address with great pleasure, and were particularly gratified in noticing the many valuable truths inculcated within the narrow limits, necessarily prescribed to such a performance. Its length, however, precludes it from a place in our columns, or we should be much pleased in throwing it before our readers, especially as we do not know that it is any where to be obtained in this city. Its particularly racy character—its common sense, business-like statements and suggestions, recommend it to the attentive perusal of every farmer and farmer's son, who may have the opportunity.

Standing in the position we do, it is in the course of our every day observation, to notice the operations of the various Agricultural Societies of our own, and other countries—the Addresses delivered before them, and the innumerable agencies that are everywhere at work, to give additional strength and stability to the vantage ground, which it would seem as if nature designed, the farmer should occupy. When men of the first character in the country, place their shoulder to the wheel, and make it a common object to accelerate the forward march of a calling, upon the productiveness of which, a thousand millions of men depend for their daily subsistence, we scarcely need be reminded of the nobleness of the effort, nor of the incalculable importance of its success. If Pennsylvania, instead of the two or three millions who now tread her soil, may be made equally well, to support five or six times that number—a population equal to that of the whole United States—who does not perceive that it must only be by the judicious application of an art, disciplined by experience, and of an industry, which, while it never wearies, is always made productive? We may scarcely calculate the extent to which our mother earth may be persuaded to yield her increase. What she has once done, she will do again, and even xceed. If sixty bushels of wheat, and one hundred nd fifty of corn, and three or four tons of hay to the cre, have been frequently grown, may not the same mounts, and even more, be one day looked to, as com-ion occurrences? To use the language of the speaker, hose Address we set out with noticing, "in propor-on as we cultivate and enrich our lands, they become onstantly, more and more fertile. By the beneficent onstitution of Divine Providence, the earth, while it ontributes to the support of man and beast, is de-igned to become more productive. or to keep up its ichness from its own activity. It is like the fountain f true charity, and beautifully emblematical of the ivine beneficence; the more it expends, the more its bundance increases. It is like the human mind; the ore active it is rendered, the more its powers are in-igorated; the more it does, the more it can do; and e more its treasures are poured out, the more its lness is enlarged."

Our author throws out a beautiful idea connected ith agricultural emulation. "In many of the pur-uits of life," says he, "one man gets rich by making nother poor. He climbs the ladder by putting his foot n another's shoulder; or he builds his own dwelling ut of the fragments of his neighbour's, which he has ndermined. Emulation in agricultural improvement" orks no such injustice. "A man can make no im-rovements in husbandry, without at once extending he knowledge and advantages of them to others. The nlargement of the capacities of the soil, and every ncrease of its productions, confers an immediate bene-t upon the whole community," and tends to the mul-lication of those designed to enjoy them.

If we compare the modern highly improved plough, ith those which we find represented in books treat-ng of ancient agriculture—or even with those we now were used in our boyhood,—if we look at the ompleteness—first, of the grain cradle, then of Hus-ey's reaping machine, or of the revolving horse-rake,—f we revert to the fact, that scores of vessels were ent last year to the shores of the Pacific, for manures o enrich the already green pastures of England, and llow ourselves to recollect, that in a few years more, t may be as common to make a thousand pounds of ugar from an acre of cornstalks, as it will then be to aise as many bushels of turnips from the same extent f ground, we may surely take courage to believe that he calling of the farmer is not stationary, nor is it estined to be, any more than that of his neighbour, who is every day deriving benefit in the prosecution f his business, from the labours of those who con-rive, while he has energy to put in practice.

The January number of the "Farmers' Register," ew series,—published at Petersburg, Va., and edited by Thomas S. Pleasants, Esq , came to hand a few days go. Originating with its late proprietor, Edmund Ruffin, and conducted by him until recently, with great bility, its usefulness and influence upon the agricul-ture of our country, and particularly that of Virginia, have yielded to those of no periodical in the United States. The present editor acknowledges himself "sensible of the disadvantages of succeeding to a position which has been so ably occupied, for ten years, by the distinguished individual" just named. Judging, however, from the present number, we are inclined to believe the high character of the Register will be ably sustained. It is published monthly—containing 64 pages, large octavo—price $5 a year.

A small pamphlet, containing "Prime facts for the farmer, the fruit grower, and the public," furnished by John Forman, nurseryman, of Onandago Hollow, Western New York, and thrown together by M. R. Bartlett, has been put in our hands. Although publishers are "requested not to make extracts from the work, and thereby harm the sale," yet, perhaps it may be allowable to state, that we are assured the cause and the cure of the slabbers in horses, have been discovered by our author, as well as infallible remedies for the diseases of the plum and peach trees. It may be had of Burgess & Zieber, in the Ledger buildings, South Third street.

A speech delivered by Professor Pendleton, of Bethany college, "at the first exhibition of the Ohio and Brooke Agricultural Society," at Wheeling, Va., in the Tenth month last, has been kindly furnished us. We have looked over it with much interest, and feel no doubt the efforts of the speaker to stir up the energies of the farmers of that vicinity, will have a salutary effect. "Agriculture," says he, "seems to be the natural avocation of man;" and great "benefactors of the human race, have deemed it their duty to give every impulse in their power, to this indispensable branch of human art." The necessity for its advancement is forcibly insisted upon. Other arts have made giant strides—why should this be found in the rear? While all should unite to promote this "great good," none should falter, because they may think its progress is slow. Steam has risen from the boiling tea-kettle, ever since it was first used; but how many hundred years elapsed before the suggestion was made, to appropriate the simple agency of steam to overcome the obstructions of wind and tide—to give more than the rapidity of the race-horse, to ordinary travel—and to impart to almost all kinds of machinery, a force and an exactness, that surprise even the most thoroughly initiated. Let none, then, imagine that agriculture is stationary, or that it is not one day, by its bold strides, to place itself along side of the most favoured arts.

It will be observed by a notice in another column, that our friend H. Colman, of the Genesee Farmer, proposes to spend a year or two in England and on the Continent, with the view of enquiring into the agriculture and rural economy of the countries he may visit. With this broad field for observation before him, and a mind and a pen eminently qualified to lay hold of, and communicate advantageously whatever it may interest us to know on these subjects, the Reports which he intends publishing, may be confidently looked to, as affording a vast amount of agricultural interest and instruction. His celebrated Reports on the agriculture of Massachusetts, made by direction of the Legislature, give earnest of what may be expected from the proposed publication. Subscriptions for the work, will be cheerfully received at this office.

☞ Many of our subscribers who may have been heretofore called upon by one of our agents, may have felt at a loss to know why they have been latterly neglected. Such will please bear in mind the great expense to us, of travelling agents, which we would, if possible, avoid. They will also, please remember the ease with which they may forward to us our small demands, through the kindness of post-masters, to whom we feel bound to acknowledge our frequent and continual obligations. It is very desirable to keep our little accounts as nearly square as possible; and we earnestly invite the attention of such of our subscribers as may be in arrears, to this notice. When remittances are received, receipts will be immediately returned.

It is but latterly that we have been gratified with a perusal of "The Southern Agriculturist," published at Charleston, S. C., and edited by J. D. Legare. Its contents are very judiciously made up, and particularly adapted to the Southern portion of the United States. We have taken from its pages one or two articles, which it has credited to other works.

It gives us much pleasure to learn from a Southern paper, that Edmund Ruffin, for many years the talented editor of the Farmers' Register, has been appointed by the Governor of South Carolina, to conduct the Agricultural Survey of that State, recently ordered by the Legislature.

In reply to the inquiry of Major John Jones, of Wheatland, Del., we inform our numerous friends in that section of country, that the Subsoil Plough, for one, two or three horses, as also, five sizes of the Centre Draught Plough, with, or without the wheel, may be obtained of D. O. Prouty, at the Agricultural Seed and Implement store, No. 176, Market street, Philadelphia.

The more than *half* promise of *Index* to furnish us with "occasional facts and suggestions," is really very gratifying. If the columns of the Cabinet possess any value or interest to the inquiring or practical agriculturist, most cheerfully do we award the merit to our correspondents, who alone, can thus enable us to make them "rich, in original and practical matter." The communication of Index, was too late for this number.

☞ An advantageous medium is opened for our agricultural friends to make their wants known, as well as to have them supplied, by advertising in our columns. The terms for short advertisements, the subject matter of which, may be in character with this paper, will be one dollar for each insertion of 10 lines, or less, and so in proportion for each additional line. The money to be paid in advance.

The quantity of rain and melted snow, which fell during the First month, (January,) 1843, was nearly an inch and a half. .... 1.44 inches.

Pennsylvania Hospital, Second mo. *1st*, 1843.

Error Corrected.—In the bottom line of the last column, on page 171, of our last number, *ton*, was erroneously printed for *tod*—an English weight of twenty-eight pounds, used, we believe, exclusively, in weighing wool.

A couple of Tonkins' fine cattle, were slaughtered in this city the latter part of last month. The four quarters of one of them weighed 1730, and of the other, 1834 lbs.; with 220 lbs. each, of rough fat.

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Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

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For seven dollars paid in advance, a *complete set* of the work will be furnished; including the first six volumes *half bound*, and the seventh volume *in numbers*. Copies returned to the office of publication will be neatly half bound and lettered at twenty-five cents per volume.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage: that is, one cent on each number within the state, or within one hundred miles of the place of publication out of the state.—and one cent and a half to any other part of the United States—and Post Masters are at liberty to receive subscriptions, and forward them to the Publishers under their frank—thus affording an opportunity to all who wish it, to order the work, and pay for it without expense of postage.

From the Steam-Press of the late Proprietors and Publishers.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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Price one dollar per year.—For conditions see last page.

Abortion in the Cow.

Editors of Farmers' Cabinet,—There have been many complaints among our farmers, during the present, as well as past winters, on account of the frequent occurrence of *abortion* among their cows. We are greatly at a loss to trace the evil to any known cause, and consequently to prescribe a remedy. I extract the following from the first number of the Farmer's Encyclopedia, recently published by Carey & Hart, and which I have been much interested in looking over. This disease, if we may call it so, is one of no trifling annoyance: and is perhaps one of the greatest to which the dairyman is exposed. It deserves and requires the close attention of experienced, practical men. We have this winter, heard of some farmers in the vicinity of Philadelphia, who have lost eight or ten calves, that have come to premature births. Should you believe the extracts I send, deserving a place in your paper, you will gratify a constant

Reader.

Abortion occurs oftener in the cow than in all other domestic animals put together. Perhaps it is one of the greatest annoyances the proprietor of cows has to encounter, and unfortunately, for aught we see to the contrary, it is likely so to continue; for in spite of the improved state of veterinary medicine, and the researches of skilful veterinary surgeons, both at home and abroad, abortion still continues as frequent and annoying as ever. The causes are frequently involved in obscurity; but it may be mentioned, that an extremely hot and foul cow-house, a severe blow, violent exertion, starvation, plethora, an overloaded stomach, internal inflammations, constipated bowels, bad food or water, improper exposure and the like, will now and then produce abortion. Any thing whatever, indeed, that seriously affects the health of the animal in general, or the state of the reproductive organs in particular, may do so. But abortion occurs again and again, when no such causes as those enumerated, can be traced. The disease, if such it may be called, as we think it may, is even said to be infectious. No sooner does it show itself in one animal than it is seen in another, and another, till it has spread over the most part of the cow-house. Some say this is to be attributed to the odour arising from the things evacuated. Possibly it may be so, there is nothing unreasonable in the supposition; for although we cannot perceive the smell, nor account for its peculiar influence, it is still quite within possibility that such an odour does exist, having the power attributed to it. There can be no great harm, however, in acting as if we were assured that the mischief has its origin in the source so commonly supposed, provided we do not shut our eyes to any other which accident or investigation may reveal. In the meantime, the number of abortions may be diminished by carefully avoiding all those causes which are known to be capable of producing it. Let the cows be regularly fed; let their food be good, and in proper quantities; let them have water as often as they will take it; avoid sudden exposure to cold or heat; and, above all, let the cow-house be well ventilated. Prohibit all manner of rough usage on the part of those who look after the cows, whether they be with-calf or not. If any of them accumulate flesh too rapidly, gradually reduce their allowance; and, on the other hand, if any become emaciated, discover the cause, and remedy it, always by slow degrees. Sudden changes in the matter or mode of feeding, should also be avoided. The same sort of diet does not agree equally well with all the cows; and this, in general, is indicated by undue relaxation, or constipation of the bowels; this should be watched, and removed at once. Attention to these, and many other minor circumstances, will amply repay the proprietor for the little additional trouble.

"That improper, or too little food," says

Mr. Lindsay, "is a prominent cause of abortion, is strongly indicated by the following facts. A friend of mine, a respectable grazing farmer, kept a dairy of 22 cows, 10 of which slipped calf at different periods of gestation. The summer had been very unfavourable in every respect, both as regarded the ground where the cows were pastured, and in getting in the hay crop. He had little or no hay of the last year's growth, and the hay of that year when cut into, was in a very bad state; but as he had no other, he was obliged to give it to his cattle. The consequence was as mentioned above; and besides, many of his stock died of various disorders; and many of those which recovered, remained long weakly."

"The most common cause of abortion in cows," says White, "is improper feeding during winter and spring, before they are turned to pasture. The filthy pond-water they are often compelled to drink, and feeding on the rank fog-grass of October and November, especially when covered with hoar-frost, are likewise frequent causes of miscarriage. I remember a farm near Berkeley, in Gloucestershire, which afforded a striking proof of the injuries of stagnant pond-water, impregnated with dung and urine. This farm had been given up by three farmers successively, in consequence of the losses they sustained through abortion in their cattle, their not being in season (that is, not conceiving,) red water, and other diseases. At length, a Mr. Dimmery, after suffering considerably in his live stock for the first five years, suspected that the water of his ponds, which was extremely filthy, might be the cause of the mischief. He therefore dug three wells on his farm, and having fenced round the ponds to prevent his cattle from drinking there, caused them to be supplied with well-water, in stone troughs erected for the purpose; and from this moment his live stock began to thrive, became uncommonly healthy, and the quality of the butter and cheese made on his farm was greatly improved. It should be observed, that on this farm the cattle were regularly fed with good hay during the winter, and kept in good pasture in summer; so that there cannot exist a doubt that the losses sustained by Mr. Dimmery, were entirely attributable to the unwholesome water the animals were compelled to drink."

"In order," adds Mr. White, "to show that the accident of warping may arise from a vitiated state of the digestive organs, I shall here notice a few circumstances tending to corroborate this opinion. In January, 1782, all the cows in the possession of farmer D'Euruse, near Grandvilliers, in Picardy, miscarried. The period at which they warped, was about the fourth or fifth month. The accident was attributed to the excessive heat of the preceding summer; but as the water they were in the habit of drinking was extremely bad, and they had been kept upon oat, wheat, and rye straw, it appears to me more probable that the great quantity of straw they were obliged to eat, in order to obtain sufficient nourishment, and the injury sustained by the third stomach, in expressing the fluid parts of the masticated mass, together with the large quantity of water they probably drank, while kept upon this dry food, was the real cause of their miscarrying. A farmer at Charentin, out of a dairy of 28 cows, had 16 slip calf, at different periods of gestation. The summer had been very dry, and during the whole of this season, they had been pastured in a muddy place, which was flooded by the Seine. Here the cows were generally up to their knees in mud and water, and feeding on crowfoot, rushes, and the like. Part of the stock had recently been brought from Lower Normandy, where they had all been affected with indigestion, by feeding upon lucerne, from the effects of which they had been relieved by the operation of paunching. In one, the opening made, was large enough to admit the hand for the purpose of drawing out the food; the rest were operated on with a trocar. In 1789, all the cows in the parish of Beaulieu, near Mantes, miscarried. All the land in this parish was so stiff as to hold water for a considerable time; and as a vast quantity of rain fell that year, the pastures were for a long time, and at several periods, completely inundated, on which the grass became sour and rank. These, and several other circumstances which have fallen under my own observation, plainly show that keeping cows on food that is deficient in nutrition and difficult of digestion, is one, if not the principal, cause of their miscarrying. It is stated by Mr. Handwin, that feeding in pastures, when covered with white frost, has been observed to occasion abortion in these animals."

If there be any probability of a cow miscarrying, from exposure to any of the common causes already enumerated, let her by all means, be put apart from the others; and let a skilful person attend to the evil from which she is expected to suffer. If the approach of abortion be evident, bleeding may be had recourse to; for if it do not check abortion, it will yet do no harm though it take place. When there are any premonitory symptoms of abortion, they are precisely the same as those which present themselves in ordinary labour, with the exception of their being less marked.

Fumigation of the cow-house is resorted to as one of the means of preventing the spread of abortion: tar, sulphur, gunpowder, feathers, and the like, are burned for the purpose of destroying the odour. We have never seen a single instance of the practice being attended with the smallest success; while it is obvious that, if carried beyond a certain point, it may produce the very evil it is intended to remove or mitigate.

It is a remarkable feature in the history of this complaint, that those cows that have once miscarried, are particularly liable to do so again, at the same period of their succeeding pregnancy. Greater care is therefore requisite to guard against those causes which do, or are supposed to excite it. The treatment of abortion, when it does take place, differs not from that adopted in cases of parturition, only that the cow which miscarries, should be removed with all that belongs to her, from among pregnant cows.

If the signs of approaching abortion, be discovered early, the accident may sometimes be prevented. If the cow is in good condition, then immediately let it be bled to the extent of five or six quarts, and the bowels opened with half a pound of Epsom salts, three or four drams of aloes in powder, or as many ounces of castor oil, administered in a quart of gruel; but if the cow is in very poor condition, and the miscarriage is anticipated from her having been exposed to cold, it would be more advantageous to avoid bleeding, and give her a warm gruel drink, with an ounce of laudanum in it. If after this, abortion does take place, let her be kept in a comfortable place by herself; and if the after-birth has not passed off, let no injudicious and unnecessary administration of violent forcing medicines, such as capsicum or hellebore, be given. Nature, with a little assistance, is generally equal to the perfect restoration of the animal.

For the Farmers' Cabinet.

Absorption of Plants.

Messrs. Editors,—Your very intelligent correspondent and acute observer, as well as first-rate practical agriculturist, W. P. K., who writes with so sharp a pen, must promise *not to cut me off at the knot*, as the saying is, and I will venture to ask, in reply to his observation, that as magnesia is found to be a component part of plants, that, therefore, it must be considered an aliment on which they feed; whether we do not find that plants will readily take into circulation ingredients, not only hurtful, but absolutely destructive to their vitality! Witness the account of experiments on the mint plants, by Jethro Tull—see page 365, of the 4th volume of Cabinet; as also late very interesting facts, relating to the preservation of timber, by filling its pores by absorption, with poisonous substances; as well as colouring matters, to imitate expensive woods. In short, I would ask, whether plants could be injured by ingredients contained in the soil, (of course I do not mean those which are so acrimonious as to be destructive of their organs of vitality) unless they were so taken into circulation. I by no means agree with your correspondent, that no good has resulted from the extended and exciting controversy, which has been carried on through the pages of the Cabinet, on the subject of magnesian lime; for I am one who believes that it is only necessary to set people to thinking, and good must come. It is like casting bread upon the waters, which will be found after many days—after people have *grown* facts for themselves. It is only for us to have patience and give a little time, and the truth will in the end prevail. We esteem that the most highly, which has cost us the most labour and expense to obtain: he then, who has *bought* the truth, will know best the value of it. T.

Delaware.

Late Grazing.—It is a bad practice to suffer the cattle to run out after they have come to the barn. The little they obtain from the fields, saves nothing from the expense of keeping them, and the gnawing of the grass roots, is a serious detriment to the subsequent crop. Sheep, especially, do great injury by close feeding the clover stubble and other sorts of grass, which from its natural fragility and tenderness, is liable to winter kill. As a general rule, all descriptions of animals should be kept up after the descent of the first heavy snow.

Running at liberty, and getting occasionally to the ground, begets a distaste for hay, and renders them fastidious as to food, generally, without conferring any advantage in return. Another important consideration, and one which no prudent and judicious cultivator will ever lose sight of, is the wastage of their manure. Even when animals are suffered to go but a short distance to water, the loss in this particular, is greater than most are prepared to admit. We have ever found that by confining our stock to their yards, during winter, we have succeeded much better than when we pursued the opposite practice, of suffering them to run at large.—*Maine Cultivator.*

New Fertilizing Substances.

Editors of Cabinet,—In the Quarterly Journal of Agriculture for June last, I find an interesting article on the application of salt, salt-petre, nitrate of soda, rape dust, &c., &c., as a top dressing for grass. An experiment is also given that was made by "Mr. Fleming on early potatoes, in 1841," the result of which is highly important, and deserving the attention of all who feel an interest in a multiplication of the means for increasing our crops. The account cannot be more clearly or briefly stated, than in the language of the experimenter. I accordingly forward it, together with Professor Johnston's remarks, for insertion in the Cabinet, if agreeable to yourselves and your readers. It would be exceedingly gratifying if we could have some detailed accounts of experiments of this character made in our own country. Yours, &c., H.

"All were dunged in the usual manner with farm-yard manure, at the rate of about 30 cubic yards per acre. The potatoes were all planted on the 25th of March, on the same *heavy black soil.* The several dressings were applied on the 20th of May, and the potatoes were all lifted on the 28th of September.

No.	Description of top-dressing.	Rate per imperial acre.	Produce per imperial acre.	Weight of produce of 18 yds. drill.	Increase in bolls.
1.	Nothing.	......	66 bolls.	77 lb.	..
2.	Nitrate of Soda,	160 lb.	80	93 lb.	24
3.	Sulphate of Soda,	200 lb.	73	86 lb.	7
4.	Do. & Nitrate of Soda,	200 lb.	107	124 lb.	41

Note.—The peck is 35 lb. weight, and 16 make a boll or 5 cwt.

"This break of ground consists of a piece of poor clay, mixed with moss, about nine inches deep; subsoil a very stiff blue till. The dung was old from the farm yard, about the ordinary quantity (30 cubic yards per acre,) spread upon the land and dug in. The potatoes were drilled in with the hoe; as the ground was wet the plants came up but weak. The nitrate of soda was sown before the other top-dressings, and had remarkably quick effect, as it showed the third night after being sown. The sulphate of soda does not occasion the dark-green colour which is seen upon the potatoe after the dressing of the nitrate; but there is not the smallest doubt of its beneficial effects, although not in so great a degree as the nitrate. The mixture, which is composed of two-thirds of sulphate of soda, and one-third of nitrate, has a wonderful effect in strengthening the growth, (which it keeps longer than with nitrate alone,) and the mixture has the same effect in producing the dark-green colour as the nitrate alone."

"Professor Johnston, in remarking on this and similar experiments furnished by Mr. Fleming's gardener, observes: 'Those who are the most sceptical in regard to the benefits to be derived from agricultural experiments, when well conducted, will scarcely question the importance of this result—the most backward in making experiments will be anxious to repeat this upon his *own* potatoes. The cost of the mixture to be applied, in the quantity used by Mr. Fleming, is as follows:—

Sulphate of soda, 75lbs. *dry*, at 10s. per cwt., or 150 lbs. in crystals, at 5s.	L. 0 6 9
Nitrate of soda, 75lbs., at 22s.	0 14 9
	L. 1 1 6

"The return for this 21s. 6d., was in each of the above cases upwards of eight tons of potatoes."

'Though the number of experiments made, and inferences which can be safely deduced from them, are far too scanty to admit of our feeling confident of success, yet, it may perhaps be admitted, that they are such as to hold out sufficient encouragement for further prosecuting the inquiry.

'This, I apprehend, can only be successfully done by the united efforts of the practical and chemical agriculturists; the former, by instituting and carefully conducting experiments on a systematic plan; the latter, by tracing the facts so obtained, to the laws of nature, on which they depend, and the progress will, in all probability, be in proportion to the number of practical men who can be induced to engage in making the experiments with precision and accuracy. It would be advantageous, I apprehend, in all cases, to analyze the soil to be experimented on; and to ascertain by weight, the kind and quantity of the material to be applied, as well as the quantity and quality of the produce obtained, from the application of each description of manure. This, however, is an inquiry which cannot be successfully prosecuted by a few individuals, nor can satisfactory results be obtained from a small number of experiments. Diversity of soil, climate, situation, season, and a variety of other circumstances, combine to throw doubts on results so obtained, however carefully conducted. But this should not deter us from prosecuting the inquiry. On the contrary, it is an additional reason for all, who have it in their power, whether owner or occupier, to contribute their share.

'Assuming then, that the object in view is of sufficient importance to merit the attention of this Society, and that the few experiments which have already been instituted, hold out sufficient encouragement for expecting a successful result, I trust I shall neither be considered presumptuous, nor over sanguine in expressing my hope, that the Society will give the subject their best consideration, and afford such aid as may seem to them best calculated to secure the coöperation of practical agriculturists, in instituting and reporting the results of experiments, carefully made, on a regular and systematic plan. We may not succeed to the full extent, but I cannot help thinking that a wide, fertile, and unexplored field in agricultural improvement, lies before us; and although it would be rash to venture an opinion as to the results, which the combined effect of science and enlightened practice may arrive at, it would be equally rash, and less politic, I apprehend, to rest satisfied with our present knowledge. Let practical men, therefore, establish facts by experiments, carefully made, whether from the suggestions of their own minds, or those of others; and let the duty of tracing these to the principles of nature, on which they depend, be zealously discharged by men of science; and perhaps, the progress may be more rapid, and the success greater, than it would be either wise or prudent to anticipate at present.'

From the New England Farmer.

Produce of five acres of land.

To the Editor,—Though there is much of romance in the accounts sometimes published of large crops, so that a sober-minded man hardly knows how much deduction to make from them in order to believe any part, yet it is also true, that *facts* in agricultural, as well as in other matters, are often stranger than *fiction*. I send you the following statement of the produce of a plot of land, measuring five acres and one and one-sixth rods, for the past year, owned and cultivated by Mr. Joshua Tappan, in Newbury, Essex county, Massachusetts. I was on the piece in October, and from what I saw of the crops harvested, independent of his own statements, I have no doubt of the correctness of the yield as given by him.

Produce of the Lot.

1	ton of hay, worth	$12 00
66	bush. corn,	44 00
42	do. oats,	12 60
6½	tons beets,	33 00
272	bush. carrots,	45 00
12	do. parsnips,	3 00
2	do. ruta bagas,	25
4	do. French turnips,	50
42	do. flat do.	4 20
6	do. cabbages,	50
274	do. potatoes,	54 80
122	do. onions,	40 00
3600	loose cabbage heads,	36 00
1761	good cabbages for market,	26 00
1½	bush. sunflower seed,	1 50
1	peck carroway seed,	4 00
½	peck cabbage seed,	6 00
½	do. turnip seed,	3 00
40	lbs. carrot seed,	17 00
20	do. onion seed,	8 00
2	bush. beet seed,	15 00
4	do. peas,	6 00
2	do. beans,	3 00
120	lbs. sage,	12 00
10	lbs. hops,	80
10	bush. tomatoes,	7 00
11	do. apples,	4 50
4	dollars worth of rhubarb,	4 00
2	do. do. asparagus,	2 00
		$405 65

Yours, &c.,

A. W. Dodge.

Hamilton, Dec. 29th, 1842.

The prices annexed to the above articles are given by the editor, and not by Mr. Dodge. We have put the sums low, generally, and some of them probably, are less than Mr. Tappan sold the marketable part of his crops for. But every one acquainted with farming, well knows that most crops have a refuse, unsaleable portion. This portion is included usually in the gross amount of crop, but cannot be sold for much. For this reason, we must put prices low, or we shall mislead many readers.

The stover, or corn fodder, is not included in the above: it probably was worth from 12 to 15 dollars.

As the quality of the articles was unknown to us, we probably have hit wide from the true mark in many instances. Four hundred dollars worth of products from five acres of land, when prices are low as at present, is a large amount.—*Editor New England Farmer.*

For the Farmer's Cabinet.

London Dairies.

Messrs. Editors,—Your readers are much indebted for a beautiful portrait of that very high-bred bull, Colostra. I had often wondered that so fine an animal had not, long ago, found his way into your pages: we have now, three bulls and two cows of the pure short-horn Durhams, that might perhaps, be termed matchless—all drawn from the life, by Woodside, and engraved expressly for your work—a *Cabinet* in themselves!

But it is a fact much to be deplored, that we seem to expect that every quality which is desirable, must concentrate in one individual breed, without reflecting that, as in England, from whence we derive all our various races, one breed of cattle may be best, under one class of circumstances, and another under others—beef in one, milk in a second, butter in a third, and work in a fourth, without offering disparagement to either, or expecting anything so unreasonable, as an union of all in any distinct breed. But this we have yet to learn, and until the time arrives, I fear we must submit to prejudices and preferences which are not compatible with our real interests. Now no one, perhaps, admires the short-horns more than I, but I am willing to admit that other breeds might vie with them in various ways: in short, as has already been said, it is unreasonable to expect to find any one particular breed possessed of the distinctive qualities of all. I freely admit, that there are instances of great milkers amongst the Durhams; and am aware that the advocates of the short-horns point to the Dairy cows of London, which are of the highest improved breed of Durhams, as proof of the fact, that they are preferable for the use of the dairy; but the history of these cows is not generally known; and I would here state, for the information of those desirous of understanding the matter, that they are selected expressly for the London dairies, over the whole kingdom, at almost any price, as the greatest milkers, and at five years of age—just in their prime; so that it is probable, not more than one cow out of twenty, from the finest dairies of short-horns in the country, may be deemed fit for the London market. As soon as it is safe to remove the calf, which is left behind for rearing, their dams are driven off to London, to supply vacancies formed by sale to the butcher, of those cows that have gone dry, after having been milked, perhaps, for nearly two years: yielding large carcasses of beef, for which there is ready sale, although it is confessedly of inferior quality. Persons undertaking to supply the London dairies with these cows, are always travelling over the country, making contracts, even at the time the calf is dropped, to be delivered at five years old, if a great milker: and hence arises the superiority of the London dairies. But great milkers are not confined to any particular breed; nor are the largest milkers, any more than the largest cows, always the most desirable, even for the butter dairy; for there are other considerations to be attended to; one of which is of peculiar importance, namely, the continuing to give milk nearly up to the time of calving; a qualification which, although deprecated by those whose cows go dry for three or four months before calving, I have never objected to. The Germantown cow, mentioned in your last, must have been a valuable animal, and there are many others of that "no breed," as they have been called, that are remarkable. I have lately heard too, of a pure Devon of the highest blood, belonging to a gentleman near Newcastle, Delaware, which is a real prodigy in the secretion of milk and butter—and have been given to understand that she is intended to compete for the offer of "$500 for the cow of other breed than short-horn, that shall give 14 pounds of butter per week; with 50 cents additional, for every ounce over that weight;" which has been made by a certain spirited breeder of short-horns in Pennsylvania. There is also a very fine cow of the polled breed, whose portrait is now in the hands of Mr. Woodside; an engraving from which would be highly valued by your subscribers, and form a variety in the list which already adorns your pages. It must not be forgotten, that the polled breed of cattle stands A, 1, in the most famous butter county of England—*Suffolk;* and I know many capital polled milkers in this country, the descendants, no doubt, of imported stock of that favourite breed. But we seem not to be aware of the fact, that we have already amongst us, the finest animals of *all* the different breeds of English cattle; and it is only to rid ourselves of the ridiculous preference for one breed over another, be the situation and circumstances what they might—the easily-besetting sin of our country, and of which many shrewd men have taken advantage—and suit the different varieties to our different wants, *as is done in England*, and we should get along much pleasanter, and with far less bickering. And for one, I am pleased to find that public opinion is leaning pretty much to my way of thinking—no disparagement to short-horns either; for they will be found superior stock for many situations, and under various circumstances, but assuredly, not in all—heterodox as the opinion will appear to many.

At page 20, of the 5th volume of the Cabinet, there is mention made of a young farmer, who never kept a cow that was not a good milker: there is much in this, and I am led to believe that my friend Johnson is right; he keeps a number of cows for the use of the dairy, and in a late correspondence on his subject, he thus expresses himself: "It s true, my cows are all superior—I never keep a bad one. Neither have I any that are too young--I never rear a calf, which you will think strange; but I will let you nto the secret, and then you will be as wise as I am. My neighbours, knowing that my cows are very great milkers, are anxious to purchase my heifer calves for rearing; they of course are ready to give me about three imes their value for the butcher, and take hem at two or three days old. I enter every purchaser's name in a book, and never ose sight of these calves, from whence I seect, at three years old, *the best;* often at a price far less than it would have cost me to ear them, taking into account the value of he keep of an animal, as I keep my cows or three years, labour, trouble, and casualies; and leave them the rest, some of which would not accept at a gift, as dairy cows. My cows are of all colours and breeds, as I have long been convinced, that quality for he pail is not confined to size, breed or coour; but much indeed to feed and age: so t is true, that 'a good cow cannot be of a bad colour.' I am quite amused, when I witness my neighbours waiting until certain young heifers shall *come in*, and certain old creatures *go out*, when they expect to make heir full complement of butter; but this time never comes; for a great proportion of these heifers—as is the case with the young of other animals, will prove quite inferior to heir parents, and not worth their keep, let alone the cost of their rearing; but they must be retained, because they are of their own breeding." Now does not this look like common sense and reason, and can we not profit by such a lesson? I, for one, mean to try. ZEBU.

January 28th, 1843.

Care of Horses in Travelling.

IF you intend that your horse shall perform a long journey, you must take particuar care of him at every stopping place. He must have something that he will eat; and he must have grain. It often happens that tavern hay looks better than it really is, and t often looks too bad to be offered to a horse. If you rely on hay to sustain your horse, and that hay is poor, you can expect to make no great progress on your journey the day following.

The best mode is, on a journey, to rely chiefly on grain; but your horse must be used to eating grain before the journey is commenced. Oats are not so solid food as corn, but if you feed wholly on oats, you will need to give no other grain. Horses are seldom injured by oats when they are given at proper times—that is, they should not be given just before starting. It is safer to give the principal part of the grain that the horse is to have, at night. He will then be ready to start early in the morning; his grain will be digested, and it will do him good.

Your cheapest and best mode will be to purchase half a bushel of oats at night, and let your horse have the whole mess. Your taverner will charge you no more than he would for half a peck and the hay. He will say the horse cannot eat much hay if he eats his half bushel of oats, and he will charge for the oats only. The highest tavern price for oats, by the half bushel, may be half a dollar. Well, you will seldom get a horse kept short of that in a large town, though he should have but half a peck of grain.

Some people fear to give grain while the horse is warm; yet they will not hesitate about giving grain just before starting. But it is hard driving after eating, not eating after hard driving, that injures a horse. It is believed that grain is no oftener injurious to the horse when he is warm, than at any other time. Let any man consult his own feelings. Does his food hurt him more when he comes in hot from work and eats it, than at any other time? Is it not violent exercise, after eating hearty, that causes severe pain? Every one who has tried it and thought of it, will answer yes.

Horses have often been ruined by hard driving, soon after being stuffed with grain. How often do we see people at public houses give their horses but little grain at night, for fear they would not eat a due quantity of hay, and then, just before starting, give a larger mess to travel upon! People who seldom travel, and who seldom give their horses grain, will stuff them with this article on the morning of starting. If the grain had been given on the previous night, there would be some chance of its doing good.—*Maine Cultivator.*

A CERTAIN portion of animal food is essential to the full developement of the mental and physical energies of man.

For the Farmers' Cabinet.

Small Stones on Arable Land.

Messrs. Editors,—Your article on this subject, in the last number of the Cabinet, brings to my remembrance a fact, which completely illustrates the doctrine there taught, that small stones are no injury to the crop on arable land; nay, it goes farther, for it proves that on some soils they are absolutely necessary to its well being. The following account may be relied upon, as the circumstance occurred within a mile of the place of my then residence, and was known to all the country round.

A person by the name of Sweet, proprietor of the beautiful farm of Alvington, in the Isle of Wight, England, which lies at the foot of the first chalk formation on the north side of that island, was a *gentleman*, in the best sense of the word, and cultivated his lands for the pure love of the occupation. He was easy in his circumstances; could afford to make experiments, and was pleased when an opportunity offered for so doing. It one day struck him, that his land, which was thickly covered over with small flints, would be much more productive if they were entirely removed; he therefore set to work, and soon collected in the corner of a large field, a mountain of them, and sowed the land with some kind of grain, which, however, totally failed in consequence; for the rains caused the fine chalky soil to run together like soft batter, which, when dry, formed a covering almost as impervious as a sheet of tin; so that the rain could no longer penetrate the earth, but was carried off into the ditches and water-courses by the hardened surface; and thus the crop was literally starved to death. But, nothing daunted, and careless of *what his neighbours would say*, he set to work and carried back the stones, carefully spreading them again over the surface, and the land became fertile as ever. This gentleman, coming afterwards into possession of great wealth, left the farm and went to reside on a large estate in a distant county, but soon found that active occupation—the charm of life—had fled, and with it its pleasures; and the farm of Alvington came into possession of a family by the name of Cheverton, an honour to the profession; who held it many years, and derived much benefit from the above experiment. I have there often seen the most productive crops of wheat, barley, oats, and even turnips, growing on a bed of flints, with not a particle of earth to be perceived between them; and which never suffered from drought in the hottest season.

And it is the easiest thing in the world, to account for the fact above stated; it is but to go into a field and turn up a stone, when a degree of moisture will be found underneath it, in the hottest day; nay more, place your hand on the shady side of a stone while the sun is shining against its opposite face, especially in the after part of the day, and a coolness, and consequent moisture, arising from condensation, will be perceived; all which must be peculiarly friendly to vegetation, on a soil which would otherwise be barren. Stones, therefore, are evidently intended to screen such soils, as without them would be sterile.* And here I must be permitted to remark, there is a passage in the Litany of the Church, which beautifully shows forth the Divine appointment, here and everywhere manifest: it is contained in the simple ejaculation, "O God! who hast made nothing in vain!" and embodies in itself a whole volume of divinity—sermons ever open to our perusal. With this devotional feeling, accompanied by that very trite but expressive maxim of general application—*nothing is impossible to a willing mind*—a man may go through the world with half the danger, trouble and difficulty, which he would otherwise have to encounter, and which befall the generality of mortals; and come out of it with a more thankful, "humble and confiding" mind and temper—a better man, and a much better farmer!

Vir.

Philadelphia, Feb. 24th, 1843.

Punctuality.—Method is the very hinge of business—and there is no method without punctuality. Punctuality produces calmness of mind: a disorderly man is always in a hurry; he has no time to speak to you, because he is going elsewhere, and when he gets there, he is too late for his business; or he must hurry away to another before he can finish it. Punctuality gives weight to character. "Such a man has made an appointment; and I know he will keep it." This conviction generates punctuality in you; for, like other virtues, it propagates itself. Appointments become debts. I owe you punctuality, if I have made an appointment with you; and have no right to throw away your time, if I do my own. Punctuality in *paying the printer*, is a shining virtue, and is one of the requisites to the character of a good member of the community. —*Selected.*

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* How constantly do we perceive, that a living spring takes its rise from beneath a rock, or even a large stone, which may often be found to lie loosely on the surface, or at best, be of accidental location—acting then, it is presumed, on the principle of capillary attraction.

For the Farmers' Cabinet.

Little Delaware against the World.

Messrs. Editors,—Major Reybold's annual exhibition and sale of fat sheep, took place at Philadelphia on the 18th of February. The present year's flock consisted of 150 wethers and ewes, of the different grades of the Leicester breed, from the pure blood, to the single cross between the Leicester buck and the Merino ewe, the first slaughtering amounting to 60 in number, taken promiscuously from the whole; and never was the character of the Bakewell blood more honourably sustained. Forty of these were slaughtered at Sheldrake's tavern, above Twelfth, in Market street: the average live weight being 179 pounds, and five pounds over; dead weight, 108½ and three pounds over, per sheep; with a quality of meat that astonished the beholders, who flocked to examine the sheep while alive, as well as their carcasses, before and after cutting up; at which time the different grades of blood could be traced with the greatest nicety and precision, in the form, as well as in the condition of the animals, and particularly, in the laying on of fat on the different points, according to the degrees of purity of blood—a practical illustration of Bakewell's theory, who used to say, "Only tell me where you will have the fat, whether on the outside or inside, on the fore-quarter or on the hind-quarter; on the rump, or on the breast, and there you shall find it; but I profess to grow mutton, and not soap and candles;" for here was the animal of pure blood, with a small carcase, weighing 120 pounds, and cutting nearly four inches thick through the rib; with a cushion of fat on the rump, and a tail like a pure broad-tailed sheep; with hams like a Berkshire hog; the leg-bone about the length of the palm of the hand, and the bone the size of the little finger, and not two pounds of fat on the kidneys; the three-quarter blood dying *poor*, and the single cross dying *capital*, with plenty of loose fat; all in exact accordance with the different grades. Then came the subdivisions, or variations of form in the same grade, showing where the animal had turned most after the sire or the dam, by the length of the leg or the thickness of the side, particularly of the plate; but most of all in the width of the back, and the kidney fat, which was uniformly small in proportion to the purity of blood, and large, where that was least exhibited otherwise: a proof of the theory, that "all the juices of an animal pass over the back; if that be broad and flat, they there remain, and go to produce outside fat; if sharp and narrow, they pass away, settle inside, and go to form tallow and inside fat."

The present occasion has afforded materials for an admirable lecture on the different breeds of sheep; and it is matter of surprise, that a course of agricultural lectures has not been got up on the principles here exhibited; the first might be made to embrace the *subjects* while living; the second, when dead and at dissection; and the third, the discussion of the *subject* at the dinner table! Now will not some of our scientific friends take up the matter and carry it out? what an opportunity to "enlighten and to charm," by a course of literary, historical, scientific and anatomical addresses, affording a broad field for practical observation and experiment, and rendering an essential service to the agricultural community, far greater than the perusal of volumes of mere theory.

The above splendid flock of sheep has been purchased by Messrs. Hesser & Nell; and they will supply the market weekly, for some time to come, with the choicest mutton, at their stall, in Market street below Twelfth, at prices to suit the times, say from 6¼ to 8 cents per pound.

Major Reybold has the thanks of the community, for his zeal in the cause of the improvement of sheep husbandry, and he richly deserves them. J. Lettsom.

Philadelphia, Feb. 20th, 1843.

For the Farmers' Cabinet.

The necessity of a change of Crops.

Messrs. Editors,—In a conversation the other day with an intelligent friend, I stated the remarkable fact, that if an animal were to be confined to one particular diet for a certain number of days, sickness and eventually death must be the consequence; when he immediately applied the *rationale* of the fact to a subject at once so highly interesting and natural, that I cannot help recording it. "Then," said he, "this shows at once the necessity of a change of food to the crop; or, which is the same thing, a change of crop to the soil—a *rotation of crops*, as it is called." Now in this little remark, a volume is thrown open to our perusal, and by studying it, I believe we may derive information and advantages at present unknown and unappreciated: and in return for the many useful hints and very pleasant ideas that I am continually reaping and garnering up from the perusal of the Cabinet, I offer the above, in grateful acknowledgment.

J. Dale.

From the Cleveland Daily Herald.

Butter Making.

Travelling across the Western Reserve, a year or two since, in company with a gentleman from New York, I was surprised to hear him state, that "in the eastern markets, *Ohio butter* was a by-word, a term synonymous with *dirty butter*.

I attempted to defend the character of the production of our dairies, and we compromised matters for the present, by agreeing to rest the decision upon the samples we should meet with, on the tables of the public houses in the course of the journey. In the end, I had the mortification to find, in a majority of instances, either an oily, rancid, or a ring streaked and spotted article was set before us, that came within the limits of his description.

This should not be. Butter is one of the staples of northern Ohio, and that which is well made, will, in all instances, command a cash price sufficient to compensate the dairyman for the extra labour he bestows upon it.

My wife and myself claim the merit of being adepts, or as political demagogues would say, "*real workies*" in this business, founded on a practical experience of near 20 years.

Our method I will detail; first premising that it is perhaps no better than that pursued by many others, for there is here and there a family that furnishes a prime article, though a large share of that which comes into market, is of an opposite character. The publication of our method may induce others to throw more light on the subject. In our hands it is invariably successful, but it is like certain chemical processes, made up of a series of manipulations, the omission of any one of which, may derange the whole and endanger the result. Every part must be carefully carried on.

1. *Choice of cows.*—A judicious selection from the common stock, I deem to be equal, if not superior to any of the imported. The Devons and Bakewells I have tried, and found them deficient in the quantity of milk they afford. The Durhams I have not tested. The Gore breed was introduced into Portage county some years since, by a gentleman, I think, of the name of Thorndike, from Massachusetts. A few of the descendants and crosses are to be met with in the south part of Trumbull county, and they prove to be the best of milkers. The quantity and quality of the milk, surpass that of any other breed in our section of the country.

2. *Change of pastures.*—To insure the production of the largest quantity of butter, a frequent change of pasture is required. A farm should be so fenced that the cows can be changed into a different lot every four or five days.

3. *Salting.*—A constant and full supply of salt should lie before our cows in some secure place. They will eat moderately what they require. If only occasionally furnished, they often take it in quantities so large, as to act medicinally to their injury.

It corrects almost any bad quality of the milk, arising from the eating of aromatic, or bitter herbs, and also much of the natural animal odour, that frequently impairs the sweetness of butter.

4. *Water.*—It is perhaps superfluous to add, that without a full and steady supply of this article for his cows, the hopes of the dairyman will never be realized. Driving them once or twice a day to a watering place, will not answer the purpose.

A large and deep excavation can be made in the several pasture lots, or between two or three of them, so as to answer the purpose, except in very protracted droughts. It should be so enclosed that cattle can approach it and drink, without running into it.

5. *Driving—kind treatment.*—Many a faithful cow has been seriously injured by a careless boy driving her furiously to and from the pasture. All harsh treatment of any kind, as scolding, striking, kicking, &c., is also detrimental. I have known many cows rendered worthless from these causes. The utmost kindness and gentleness of manner must be shown on the part of those who manage our stock. I once dismissed a hired man for striking my cows. Too much cannot be said on this point.

6. *Milking.*—This process should be done systematically, at regular periods of the day. Sun-rise and sun-set are perhaps the best periods; for immediately after the one, and before the other, cows in hot weather feed to the best advantage. They are so much creatures of habit, that the milker should be changed as rarely as possible. A stranger is always regarded as an unwelcome visiter, by a milch cow.

7. *Cleanliness with the utensils.*—The pans, pails, strainers, bowls, churn, and every implement employed in butter making, must not only be well washed, but they must be thoroughly scalded with boiling hot water, and be perfectly dried afterwards, either in the sun or before a fire. This must be repeated every time they are used. Merely pouring boiling water upon them when loaded with sour milk or cream, will only serve to scald in the bad flavour, if I may use the expression. Wash them at

rst, and then scald them thoroughly, if you
ould have sweet butter.

There are certain filthy practices which
atterns fall into, that should be corrected—
ch as wetting the cow's teats with milk,
nd permitting it to drop into the pail—
ilking in the morning without washing
e hands, &c.

8. *Milk-house and buttery.*—In hot wea-
er a good spring-house is necessary for the
aking of butter. It must be constructed
f either brick or stone, and in no instance
f wood, as that article never fails, in such
situation, to become mouldy, and impair
e flavour of butter. It must be built so
at it can be thoroughly ventilated. A
indow should be placed on the north, east,
nd west sides, which must be furnished on
e outside with wire gauze screens, and on
e inside with tight shutters. During the
ay, the shutters must be closed, and at
ight must be raised.

A spring may be dispensed with—and it
s even problematical whether it does not,
pon the whole, do as much injury by im-
arting dampness, as it does good by lower-
g the temperature. A well constructed
ouse without the spring, will answer the
urpose. It should be shaded with trees, or
rbours of grape-vines. All mouldy and de-
aying wood-work, boards, boxes, barrels,
c., must be kept out of it—also all foreign
ubstances, as meats, fish and vegetables.
he air of my spring-house was ruined for
week or more, merely by placing in it a
w mackerel.

At the approach of autumn, a cool and well
entilated buttery, shaded well without, and
ept clear of all foreign substances that can
npart a bad flavour, is preferable to a spring-
ouse, as the latter becomes too damp, at that
eason, to allow the cream to form well.

9. *Straining the milk.*—This should be
ttended to without delay, after milking.
he new fashioned tin strainer (a tin pail
ith a wire gauze strainer) is far preferable
the old fashioned cloth strainer. Either
in pans or stone crocks may be used for
olding the milk; I know of no preference,
xcept the tin work is liable to rust in a
amp spring-house. Earthen crocks should
ever be used, as the lead in glazing may
ct chemically with the cream or butter, so
s to poison it.

10. *Skimming the milk.*—In hot weather
he milk may be allowed to curdle before
his operation is performed, but if it be de-
ayed any longer, a thin, watery fluid will
orm between the milk and the cream, after
hich the good qualities are inevitably de-
troyed. It is necessary, in mid-summer, to
kim the milk every morning and night.
This point must receive the strictest attention. Neglect of it often gives a streaked or mottled appearance to butter, as well as impairs its flavour.

11. *Cream.*—As soon as it is collected it should be placed in a stone crock, which should be either hung into a well, or set up to the brim in the spring within the milk house.

It has been thought by some that the cream improves, or matures, by exposure to the air after it is collected, and that placing it in a situation as cool as a well, or spring, is unfavourable for that change. This view may be correct late in autumn, when it becomes sometimes necessary to mature it by artificial heat, but during our hot and dry summers, we believe the course recommended is to be preferred.

12. *Churning.*—This operation must be resorted to as soon as a supply of cream is obtained, and in hot weather cannot safely be delayed beyond the third day.

A variety of patent churns have been palmed upon the public, none of which, we believe, is to be preferred to the old fashioned, upright dasher, or the barrel. We at present employ the former, and by the aid of a well adjusted spring pole, connected with the top of the dasher-rod, can fetch 12 or 15 pounds of butter, in from fifteen to twenty-five minutes, without any violent efforts. The barrel-churn is not as easily cleansed.

13. *Working of butter.*—This must be repeated until every drop of the buttermilk is expelled; twice or three times will be necessary, nor must it be delayed too long, till a change begins to take place in the remaining buttermilk, as that will impair the flavour of the butter, which no subsequent treatment can restore.

The operation must be done in a bowl, by the aid of a wooden spatula, or paddle, and in no instance should the hand come in contact with the butter, if it can be avoided, as the warmth of the individual renders the butter oily and bad flavoured.

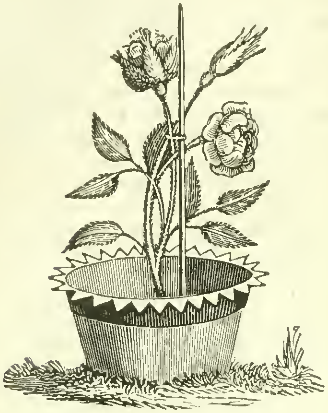
Some persons destroy its sweetness and richness by washing out the buttermilk, by means of cold water, a practice always to be avoided.

14. *Salting.*—The salt should be added at the commencement of the first working. Much of our western butter is injured by the employment of the common New York salt. The finest *ground* article should be used. It can now be obtained in sacks, of our merchants, at a reasonable price.

15. *Preserving butter.*—That made in the spring and summer, may be laid down in *stone* crocks, and the surface covered with brine of strength sufficient to bear up

an egg. In winter this will answer all the purposes of cookery, and even for table will be sweeter than much that finds its way there. J. P. Kirtland.

Rockport, October 14th, 1842.



For the Farmers' Cabinet.

The Galvanic Plant and Tree Protector.

Messrs. Editors,—If you have seen the Galvanic plant and tree Protector, or are in possession of a more minute description of it than has appeared in our late papers, you would confer a favour, by giving the necessary directions to a mechanic to make it, and giving the public his address.

A Subscriber & lover of fruit.

Dec. 21st, 1842.

We have caused one of the Protectors to be made for the inspection of our friends, and it may be examined at our office. It is neatly constructed by a first-rate workman, Mr. W. H. Orr, No. 344, Market street, Philadelphia, who is ready to supply them of the following size and price, viz: 6 inches diameter at top, 4¾ inches diameter at bottom, 4 inches deep.—Price 37½ cents.

In the "Gardener's Magazine," for April, 1841, conducted by J. C. Loudon, and published in London, there is a particular account of this very curious contrivance, contained in a letter from the inventor to Arthur Aikin, Esq., Secretary of the Society of Arts, from whence we copy the following interesting particulars. Mr. Walker says, "I have had these Protectors in use in my own garden for twelve months, and can assure you that, although during that period, plants on all sides have suffered from the ravages of the molluscæ, not a plant has been injured that has had the protection of the galvanic circle. The annexed drawing and description will exhibit the apparatus, and explain its operation. It consists of a somewhat conical ring of zinc, of the following dimensions, viz: 6 inches in diameter at top, 4¾ inches at bottom, and 4 inches in height. The top edge is flanged off, say half an inch, and cut into zigzag or vandyke points. Immediately under this flange, a ring of thin copper is neatly fitted, being exactly of the taper with the zinc ring, and one inch broad, forming a copper hoop around the zinc; this copper ring is fixed in its place by means of a dot of solder, in three or four places. Such is the apparatus, and its operation is thus: the bottom of the zinc ring being pressed into the soil until the copper ring is about an inch and a half above the surface of the earth, the molluscæ, &c., may crawl up the zinc with impunity, but on coming in contact with the copper, will receive a galvanic shock, and immediately turn away or fall to the ground. I have repeatedly watched them, and have observed they were extremely cautious in approaching a second time. In fixing the Galvanic protector, care must be taken to enclose within it the rods which are required for the support of the plants; otherwise the molluscæ would find a ready way to the plant by them. The apparatus acts in wet or dry weather, and is therefore always in action. Its appearance when in use, is like a vandyked flower-pot, and its cheapness, neatness, utility and durability must ensure its general adoption.

"I believe the same principle may be applied to walls, &c., for the protection of fruit trees; straps of zinc and copper being placed in contact with the tree and along the wall; in this arrangement the copper might be made to clip over or embrace the edge of the zinc."

Thus far Mr. Walker. Mr. Loudon goes on to say; "The sensation of galvanism is produced by placing in contact plates of zinc alternating with plates of copper, and a piece of moistened cloth between each. Now, if a snail or slug be placed on a plate of zinc, to which a narrow plate or strip of copper is fixed near the edge, and the zinc turned over it so as to form a rim of zinc, copper and zinc, it creeps unmolested on its surface, until it touches the rim where the copper is, when it receives a galvanic shock—its moist, soft body, acting as the moistened cloth—and immediately recoils, twisting itself back, and rarely ventures a second time to touch the copper. To protect a plant or crop, then, it is only necessary to have a zinc plate of sufficient length to surround it, of five or six inches broad, with a strip of copper one inch broad, riveted to the upper part of the strip of zinc, and the zinc turned over it so as to form a rim: the plate, so prepared, is then to be set on edge round the bed or plant. We have had one circular rim made with the copper on the *inside* instead of the *outside*, and having enclosed a number of snails and slugs in it, we find them hitherto, effectually imprisoned; and this we conceive to be a more efficient test of the galvanic influence, than employing it to protect a plant; because in the latter case, the creature may turn for food elsewhere, but in the former, it must starve, if it does not cross the galvanic battery."—Ed.

P. S. It must be added, Mr. Walker is not certain that the galvanic arrangement operates on *dry* animals; but on the mollusca tribe it does, powerfully.

For the Farmers' Cabinet

Ants and their Cows.

In an interesting article in the last number of the Cabinet, mention is made of a singular little animal, from which the ant is accustomed to collect honey with a regularity equal to the dairyman.—During the perusal of a late publication, I have met with a more particular account of this most singular fact, and believing that the generality of your readers will be as much gratified as I was by the perusal, I send it for insertion in your next, if space can be spared, and remain, A Subscriber.

January 19th, 1843.

Unparalleled and unique in the animal kingdom as this history may appear, you will scarcely deem the next I have to relate, less singular and less worthy of admiration. That ants should have their *milch cattle*, is as extraordinary as that they should have slaves. Here, perhaps, you may again feel a fit of incredulity shake you. But the evidence for the fact I am now stating being abundant and satisfactory, I flatter myself it will not shake you long.

The loves of the ants and the *aphides*, (for these last are the kine in question) have long been celebrated; and that there is a connection between them, you may, at any time in the proper season, convince yourself; for you will always find the former very busy in those trees and plants in which the latter abound; and if you examine more closely, you will discover that their object in thus attending upon them, is to obtain the saccharine fluid, which may well be denominated their milk, that they secrete.

This fluid, which is scarcely inferior to honey in sweetness, issues in limpid drops from the abdomen of these insects, by two setiform tubes, placed one on each side. Their sucker being inserted in the tender bark, is without intermission employed in absorbing the sap, which, after it has passed through the system, they keep continually discharging by these organs. When no ants attend them, by a certain jerk of the body, which takes place at regular intervals, they ejaculate it to a distance; but when the ants are at hand, watching the moment when the aphides emit their fluid, they seize and suck it down immediately. This, however, is the least of their talents; for they absolutely possess the art of making them yield it at their pleasure; or in other words, of milking them. On this occasion, their antennæ (feelers) are their fingers; with these they pat the abdomen of the *aphis*, on each side alternately, moving them very busily; a little drop of fluid immediately appears, which the ant takes into its mouth, one species (*Myrmica rubra*,) conducting it with its antennæ, which are somewhat swelled at the ends. When it has thus milked one, it proceeds to another, and so on, till being satiated, it returns to the nest.

Not only the *aphides* yield this repast to the ants, but also the *cocci*, with whom they have recourse to similar manœuvres, and with equal success, only in this case the movement of the antennæ over their body, may be compared to the thrill of the finger over the keys of a piano forte.

But you are not arrived at the most singular part of this history—that ants make a *property* of these cows, for the possession of which they contend with great earnestness, and use every means to keep them to themselves. Sometimes they seem to claim a right to the aphides that inhabit the branches of a tree or the stalks of a plant; and, if stranger ants attempt to share their treasure with them, they endeavour to drive them away, and may be seen running about in a great bustle, and exhibiting every symptom of solicitude and anger. Sometimes, to rescue them from their rivals, they take their aphides in their mouth; they generally keep guard around them, and when the branch is conveniently situated, they have recourse to an expedient still more effectual to keep off interlopers—they enclose it in a tube of earth or other materials, and thus confine them to a kind of paddock, near the nest, and often communicating with it.

The greatest cow-keeper of all the ants, is one to be met with in most of our pastures, (England) residing in hemispherical formicaries, which are sometimes of considerable diameter. I mean the yellow ant of Gould. (*F. flava.*) This species, which is not fond of roaming from home, and likes to have all its conveniences within reach usually collects in its nest a large herd of a kind of aphis, that derives its nutriment from the roots of grass and other plants, (*Aphis radicum;*) these it transports from the neighbouring roots, probably by subterranean galleries, excavated for the purpose, leading from the nest in all directions; and thus, without going out, it has always on hand a copious supply of food. These creatures share its care and solicitude, equally with its own offspring. To the eggs it pays particular attention, moistening them with its tongue, carrying them in its mouth with the utmost tenderness, and giving them the advantage of the sun.

Our yellow ants are equally careful of their aphides. After they are hatched, when their nest is disturbed, conveying them into the interior, fighting fiercely for them if the inhabitants of neighbouring formicaries, as is sometimes the case, attempt to make them their prey, and carrying them about in their mouths to change their pasture, or for some other purpose. When you consider that from them they receive almost the whole nutriment, both of themselves and larvæ, you will not wonder at their anxiety about them, since the wealth and prosperity of the community is in proportion to the number of their cattle.—*Kirby & Spence's Entomology.*

Care of Animals.

All kinds of animals require much care in cold weather, or at any season when shut up, in order to preserve them in good health and condition. For want of attention they frequently become diseased and die, or grow poor, to the great loss of the owner. And it is frequently the case that animals thus treated, or rather neglected, consume about as much food as would be necessary to keep them in good health and flesh, with proper care. Salt should be given to animals occasionally, both as a means of thrift and preventive of disease.

By the free use of salt we have known severe disorders that have appeared among a herd of cattle, first mitigated to a mild form, and finally arrested before going half through the stock, when, without some preventive means, such diseases would have prevailed through the herd.

In cold weather salt should be given in small doses, lest it open the pores and produce colds. Wood ashes mixed with salt, in the proportion of four to seven quarts, to a quart of salt, is considered excellent for stock, as it promotes an appetite and prevents diseases. It will prevent bots in horses, and rot in sheep.

We have given this mixture with evident success. Cattle and sheep will generally eat it freely. Horses are more particular than most other animals, as to what they eat or drink. Some of them will not eat this mixture. In such cases mix a small quantity of ashes with salt at first, and put them on roots of which the horse is very fond, and in this way he will get accustomed to eating this wholesome *condiment.*

Animals should have a good supply of pure water. Some persons think that sheep do not need water in winter, when they have access to snow; but if such persons will supply them with water, they will see their great mistake, not only from the decided preference which the animals give to water, but from their superior condition; and the advantages will be evident by the greater number, size, and superior condition of the lambs. Sheep will go a considerable distance after water, and go oftener than cattle, after they have first been coaxed or gently driven to it, that they may know where to find it.

Cattle should be fed regularly, and have but a small quantity of fodder at a time, as they will breathe upon it and render it unpleasant or offensive. To prevent this in some measure, the cattle-house should not be boarded up in front, excepting above the heads of the cattle, and one board at bottom to keep the hay in its place. Then the breath of the animals will pass off with less injury to the fodder, and afford good wholesome air for respiration.

Boys should be early taught to feed stock, as it is a business that requires much experience and a sound judgment, according to the kind and condition of stock, the fodder, weather, &c. But they should have the advantage of constant instruction and superintendance of some one of riper years. This supervision is necessary, where boys are faithful and attentive. In some cases boys are negligent, and then it becomes more important, as they may manage somewhat like the old negro, who threw all the hay to the master ox, and requested him to divide it among them.—*Farmers', Journal.*

Good Old William West, the celebrated and successful farmer of Delaware county, always had a large bed of compost, duly and properly prepared in the field he intended to plant with corn, wherewith to dress it. He raised fine crops and improved his farm, and left a good example for others to follow. It was a maxim with him "to be kind to the soil," and he reaped his reward.

Query, was there ever a farmer who annually prepared and applied a good bed of compost to his corn, who did not thrive and prosper in his calling?

For the Farmers' Cabinet.

Hampshire Bacon.

Messrs. Editors,—I am an emigrant, a native of Hampshire, England; that county so famous for bacon—the county of Berkshire, being as noted for hogs. Now, many of your readers may consider these terms somewhat synonymous, but nothing is more evident to all Hampshire-men, than that there is a wide and essential difference, plainly discernible to four of our five senses; namely, to our sight, smell, taste and feeling. To what these differences are owing, might not be so easy to say, but that there is something real in it, is palpable to all; and especially in the fact, that all over England, it is known and acknowledged.

Although no longer a practical farmer, I read the Cabinet; for I am like an old stager, and often find myself pawing the ground at the sound of the ploughshare in early spring; feeling extreme interest in every thing that relates to the theory and practice of agriculture, and often turning to your pages with great delight: my last perusal having led me to the re-examination of the cut of the Hampshire hog, page 121, of the fifth volume, which has been the cause of my addressing you at the present time. And here let me ask your readers, whether they do not perceive a peculiar softness in the animal there so faithfully portrayed, indicative of delicacy of texture and tenderness; far different to the rotund form and peculiar thriftiness of the improved Berkshire, which, it is admitted, portend a hardihood in the hog, but which, in my estimation, is the cause of a *hardness* in the bacon. Certain it is, that in Hampshire, we always prefer a deep-sided hog to a barrel-shaped animal, knowing *that* to be the true criterion of "streaky bacon;" but by this, I do not mean a slab-sided brute, but one with a deep side, pretty equal in thickness through its whole length, without those enormous masses of muscular meat, forming such protuberances at the shoulders and hams, which have been trumpeted forth as the perfection of the pure Berkshire. There, also, a soft, woolly coat is preferred to a thin shining one—which is again the boast of the Berkshires; nor do we care so much for the qualification, "to be able to live upon nothing;" satisfied, if they pay for what they eat; as the farmer's business is to grow crops for the support of beast as well as man, and content, if he can bring his hogs to a good market.

But the fatting of these hogs I believe to be almost peculiar to that county; for, diverse as may be the articles forming their diet at the commencement of the fatting process—some commencing with raw, boiled or steamed potatoes, carrots, parsnips, with a mixture of meal, peas, beans, or oats, &c., yet it is held a *sine qua non*, that they be finished with barley-meal, mixed either with milk or water. This gives to the meat a peculiar firmness, which prevents waste in cooking, and gave rise to the old adage, "A good hog grows half in the pot." At the time of slaughtering also, they are not scalded, but the hair is singed, by covering them with wheat straw and setting it on fire: this communicates a particular flavour to the meat, and is thought to add much to its good quality; although to those unaccustomed to the practice, it might be considered not the most delicate way of doing things. Then again, the salt which is used in curing, is made from sea-water, the crystals large, and quite free from magnesia and other impurities; and the most careful rubbing, turning and tending the sides of bacon, is observed while lying in the pickling trays; the process ending, by exposing them, now called flitches of bacon, to the smoke of a smouldering fire made with saw-dust, for many days, in large smoke-houses built for the purpose. All these manipulations at length furnish an article, that, once tasted, the flavour long abideth.

In my walks, I sometimes meet a fine Neapolitan sow, the property of a gentleman who purchased the animal at a high price a great distance from home; and incurred the expense of her carriage, in the hope of introducing another and a new excitement. She is all but destitute of hair, and if I might be permitted, I would ask, is it not rational, is it not natural to presume, that to enable the creature to bear the cold and vicissitudes of the weather, she has been endowed with powers of endurance in the shape of a hard and inflexible texture of skin and muscle, by no means likely to produce that delicate cellular frame of body, so essential, and so observable in the real Hampshire breed of hogs.

Since writing the above, I have seen at the Union drove-yard, on the Ridge-road, Philadelphia, two pens of 10 hogs, part of them belonging to Mr. Frantz, of Paradise, Lancaster county, which come up to my standard of the "beau ideal." On all of these the hair is white, soft and fine, but upon four of them the coat is peculiarly long and curling, with a skin of fleshy hue, indicating a mellowness of handling, that cannot be mistaken. Here is the deep flat side, with an even length from *stem to stern*, such as is indeed seldom witnessed. They are supposed to weigh from 5 to 700 hundred pounds each,—say, therefore, about 600 on an average; and are a cross between the Chester county and the English Hampshire breed. Need any more be said? Indeed they are real *Windsor Castles!* T. R.

Chester county.

Winter in Russia.

Under the head of "Winter at St. Petersburg," we find the following in the *Constitutionel:*—says the Ledger:

"Winter is more variable at St. Petersburg than at Moscow; that is, the cold does not reign there with such continued severity. Thus, for instance, it is said not to be a rare circumstance at Moscow, to find a fruit peeling, or any other matter thrown by chance from a window, catch on the balcony, and becoming immediately frozen, remain there suspended for the most of the winter. Such a case could not occur at St. Petersburg, where, although the thermometer often descends to 30 degrees of Reamur below zero, (35½ below zero of Fahrenheit) the neighbourhood of the sea combats the icy winds of Siberia, and unexpectedly brings on the most strange changes in the temperature. It has never rained in the memory of man at Moscow, during the months of December and January. At St. Petersburg, on the contrary, rain frequently falls during these two months, and at that period it has been constantly the custom to replace carriages by sledges. This latter kind of vehicle, which no person gives up, becomes the most convenient in the world, being driven in the midst of snow and mud. The winter at St. Petersburg, on account of these sudden transitions, so unexpected and so rapid, is far more formidable than at Moscow, and to strangers, who have not experienced its effects, is particularly serious. To defend one's self from the weather, the most constant and minute precautions are required.

"In October, the Russians, and all who have been long in the country, assume fur clothes, and keep them in continual wear until the month of April, after the ice has broken up on the Neva. Stoves are lit everywhere, and each family lays in a stock of birch wood, the blaze of which is more abundant than of any other wood. There is a servant especially employed to attend to the stoves, and his duty is to keep up as much as possible, an equal heat throughout the house. The best stove-keepers, whose fame procures them a high salary, are generally from Moscow. Twenty degrees of cold, do not appear astonishing to an inhabitant of St. Petersburg, though he then casts a curious look at the thermometer. At 23 or 24 degrees, constant rounds are made during the night, to prevent the police and sentinels from falling asleep on their posts. Should the cold bring on drowsiness, and the sufferer not be able to prevent himself from yielding to its influence, he must perish, as he can only wake from his sleep in the other world. At 25 degrees the theatres are closed, and all those who are obliged to go out on foot, hurry along with their utmost speed, most anxiously looking at the nose of all whom they meet in the street. If a sudden paleness—of which no intimation is given by any physical feeling—should appear on that part of the face, the passer by, rushes forward and commences rubbing the afflicted feature of the alarmed passenger with snow, to produce animation.

"The same thing may occur to the operator before the hour is over. At 30 degrees of cold, the populace alone go out of doors, entire families shut themselves up, and not a single sledge of any appearance of fashion is seen in the streets. Yet even then the military reviews are not interrupted, and the highest dignitaries, up to the Emperor himself, repair to them without a cloak. It must be evident that, with cold of such intensity, the sufferings of the poor must be dreadful. Yet it may be affirmed, without exaggeration, that the lower classes in winter, suffer less in Russia than in France. There are placed in the various quarters of every large town in the empire, public establishments heated by large stoves, where every person that pleases, may take refuge. Dreadful accidents undoubtedly mark the arrival of the severe season, but they generally fall on the servants of Russian noblemen, whose carelessness towards their servants' comfort, is akin to barbarity. It must not be forgotten either, that three-fourths of these accidents are attributable to the abuse of spirituous liquors. The passion of the people for brandy, sets at defiance every warning, and in winter it becomes more than usually fatal."

The Search after Rest.

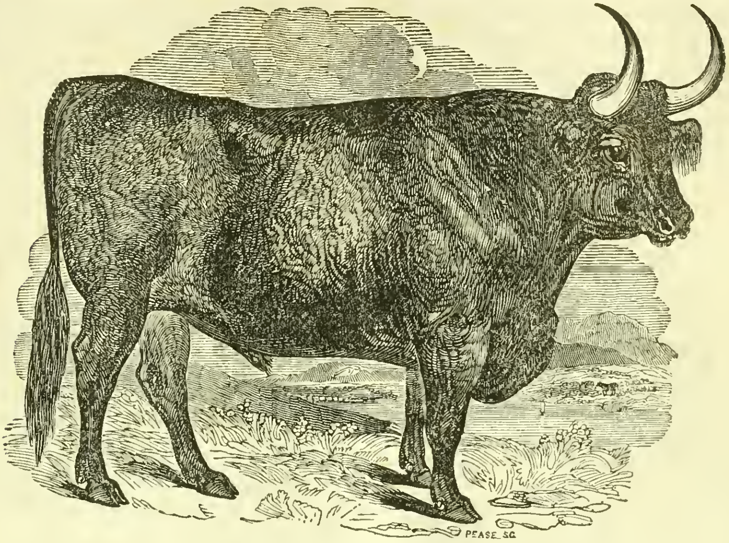
By J. Cunningham.

When first the Dove, afar and wide,
Skimmed the dark waters o'er,
To seek, beyond the heaving tide,
A green and peaceful shore,—

No leafy bough, nor life-like thing,
Rose 'mid the swelling main—
The lone bird sought, with faltering wing,
The hallowed Ark again.

And ever thus man's heart hath traced
A lone and weary round;
But never yet, 'mid earth's dark waste,
A resting place hath found.

The peace for which his spirit yearns
Is ever sought in vain,
'Till, like the Dove, it homeward turns,
And finds its God again. [*N. Y. E. Post.*



THE ANGLESEY, OR NORTH WALES OX.

The Anglesey cattle are small and black, with moderate bone, deep chest, round barrel, high and spreading haunches; the face flat, with the horns long, and almost invariably turning somewhat upwards. The hair is apparently coarse, but the hide is mellow; they are peculiarly hardy, easy to rear, and well disposed to fatten. The young of this breed, have little more than hay-tea and gruel, with the common broth of the house to subsist on; and when reared, are in a manner totally abandoned; their best treatment being, oat or barley-straw, scarcely enough to keep them from starving, while folded in an unsheltered yard; the face of the country and the nature of the soil affording but little provision for winter feeding. Such treatment would deteriorate any breed, less hardy than that of the Island of Anglesey; the practice of the middling and small farmers, and indeed many of the largest, of selling off their best yearling heifers and keeping the poorest only, for the dairy and breeding, and the culpable and general neglect of selecting good bull calves, as also the want of proper enclosures, by which the steers could be kept from the rest of the stock, contribute to increase the deterioration. Many experiments have been tried, in order to improve the breed, but it was difficult to find another race sufficiently hardy, to withstand the climate and privations to which they were exposed; and although the first cross might seem to effect a change for the better, the native Anglesey blood would predominate, and the produce breed back; and after a few generations, there would be the original breed again, scarcely altered; or if so, for the worse, by being deprived of a portion of its hardihood. It is true, the cross with the Lancashire bull would give an increase of size, amounting to 50 pounds per quarter, when three years old, and even a propensity to fatten quickly; but generally speaking, no permanent improvement has been derived from crossing; but dearly-bought experience has forced upon the breeder this truth, that it is false economy to starve a growing breed.

The Anglesey cattle are principally destined for grazing; great numbers of them are purchased and prepared for the Smithfield market, where their size—an intermediate rank between the English breeds and the smaller varieties of Scotch cattle, renders them an object much sought after: and if they are somewhat longer in preparing for the market, than some of the favourite English breeds and the Scotch, they often pay more at last; and they will thrive where an English beast would starve. The North Wales cattle were formerly used very extensively for the plough; they were docile and hardy, strong, active and willing; but would have been better adapted to the purpose of draught, if longer in the leg and less deep in the chest. They have a peculiarly noble appearance, a stateliness of gait and a haughtiness of countenance; a projection of the breast and lofty bearing of the head, not recognized in any other breed, and strikingly in contrast with the mild intelligence of the Devon, and the quiet submission of the Hereford. No more cows are kept for the dairy, than are sufficient for the home consumption.

For the Farmers' Cabinet.

Magnesian Lime.

Observing in the last two or three numbers of the Cabinet, various opinions with regard to the use of magnesian lime, I will give my own experience in connexion with that of some others, and leave the inquiring reader to judge for himself.

In the sixth month, of 1837, I applied 1000 bushels of Schuylkill slacked lime, said to contain a large portion of magnesia, to about 15 acres; the soil was so thin that under the most favourable circumstances, as to season and good cultivation, I could not have calculated, without the aid of artificial means, upon more than from 12 to 15 bushels of corn to the acre. In the autumn of the same year, I perceived a trifling improvement in the appearance of the grass, which in the ensuing spring, was still more perceptible, and which continued up to the commencement of the severe drought of that year. Late in the fall, after the abundant rains, the blue grass sprang up quite thick through the poverty grass which had heretofore covered the surface. Early in the spring following it was ploughed, but not so deep as I should otherwise have done, wishing to avoid burying the lime too deep. Between the 24th and 27th of fourth month, it was planted in corn, and as the soil was very thin, I had it run out full four and a half feet wide, and planted in the rows about two feet apart. It came up well, and continued remarkably healthy and vigorous, through the whole season. It had three dressings with the cultivator, and was hoed only enough to smother the grass between the hills; the result was from 35 to 40 bushels per acre. I think I should have had at least five bushels more to the acre, but for a violent storm early in the eighth month, of rain and wind, which prostrated the whole field in such a way, that it never afterwards stood upright, besides which, a great deal was broken entirely off. The same fall the field was sown in rye, and the spring following, with timothy and clover seed; it has now the appearance of land of *more* than a medium quality. It may be remarked that about one-fourth of this field was not limed; but the corn was manured in the hill, with hog-pen manure and wood-pile scrapings, which were decidedly beneficial; the corn was still not to be compared with the part that was limed; and a transient observer, at the distance of a mile, at this day, could hardly fail to notice the improved appearance of the part that was limed, over that which was manured.

The combination of magnesia, or some other deleterious substance, with this lime, I think is evident from the fact, that it was in the first place hauled in the field and put in two piles: when spread, it was taken with due care from the bottom of one of the piles, so as not to leave it thicker than upon the surrounding ground; consequently the corn grew equally well upon this spot, as upon the other parts limed. The other pile, from some accidental cause, was not taken away so carefully—upon this spot the corn came up, but soon withered and died, nor has any thing more than a stinted vegetation grown upon it since.

This experiment, I think, shows conclusively the following results:—first, that lime, although containing a large portion of magnesia, is an excellent fertilizer, when put on in *moderate* quantities. Secondly, when put on lavishly, it *destroys* vegetation:—and thirdly, when spread upon the grass, and allowed to remain two or three years before ploughing, it acts powerfully on the first crop.

Whilst on the subject, the writer will take occasion to say, that the district of country in which he resides, (Harford county, Md.,) now has access, through the medium of the tide-water canal and the Conestoga navigation, to the inexhaustible beds of limestone, in both York and Lancaster counties. The qualities of this lime vary materially—some is said to partake *largely* of magnesia, other of magnesia and slate, other of magnesia and sand; and other again, with but a *small* portion of magnesia. The writer of this thinks he feels warranted in saying, that of this latter description, from 3 to 400 bushels might be applied to the acre, without any injurious effect, yet he is convinced that no advantage could result to the crop that would justify so lavish an application. Economy would forbid it. If from 50 to 100 bushels per acre, admitting it may have in it a portion of magnesia, will produce a crop which in a general way appears to give satisfaction, I can see no inducement to make so large an outlay of capital, unless it be to *prove* that pure lime is perfectly harmless, notwithstanding the quantity put on—whilst we *dare* not use the magnesian lime so lavishly.

I have been the more disposed to take up my pen, from reading an article in the last number of the Cabinet, over the signature of Isaac Wayne Van Leer. I acknowledge my own experience in the use of lime is limited; but I will venture the opinion, that all past experience is against his unqualified denunciation, not only of magnesian lime, but from the anecdote relating to Colonel Brooking, in connexion with some other expressions, of *pure lime also.* Now can it be possible, that this writer can be so wedded to his own notions, backed by a few corroborating circumstances, as to imagine that his views on the subject can ever be endorsed by an *intelligent* and *experienced* public? Well might the supposed query of the *Magnesians* occur to his mind:—"How can it be that so many of our intelligent farmers have been so deceived?" But I do not believe that he could so easily answer that question to *their* satisfaction as to his *own.* I have no idea that his views on the subject will draw in the reins of a single team, of the hundreds engaged in hauling lime and limestone, in Lancaster, Chester and Delaware counties, and composed of as fine draught horses as could be found in any other three adjoining counties in the Union, *maugre* the far-fetched theory, that they had been eating and drinking in, the insidious and poisonous effects of magnesian lime, ever since the day of their frisking and gamboling by the sides of their robust and sturdy dams.

That lime acts more or less advantageously on different soils, will be readily conceded, as well as that on some soils, it is entirely inert; but this I suspect is very rare. That there may be also worn-out land, naturally of good quality, but owing to its locality, out of the reach of artificial manure, thus compelling the owners to avail themselves of the only means within their power for improvement, is most strikingly exemplified in the neighbourhood of Deer creek. Long since the recollection of the writer, the crop of wheat seldom repaid the costs of cultivation; and a fat bullock, except for family use, was more rare than are 6 to 800 *now*, annually fatted for market;—and this improvement has all been brought about by the very means proposed: namely, plaster, clover, ploughing in the latter, and an increased attention to making and saving manure. I could name individuals who had brought their lands to a state of productiveness not often surpassed, yet since the facility of getting lime, and being further spurred on by a visit during the last spring, through Chester and Delaware counties, and becoming convinced to their own entire satisfaction, have since commenced liming with great spirit. My next neighbour, a practical farmer, having brought his lands to a high state of cultivation, and whom I have often heard say that he would not give one bushel of plaster for 100 of lime, has got rid of his scepticism, and is also now liming largely, say from 3 to 4000 bushels per annum. His first experiment commenced two or three years ago, on a field of about 20 acres, being part of a tract of poor, worn-out land, he had then recently purchased at about three dollars per acre. His crop of hay on this field the last season, was not much short of 40 tons. He has since limed nearly the whole of this farm, which promises an equal return to his industry and enterprise. Similar conclusive instances might be multiplied without limit, among which there is one other, having a direct bearing upon the erroneous opinion, that "a second liming has no good effect," with which I must beg the indulgence of taxing the patience of my reader. I had some business during the past summer with our estimable Chief Judge, S. A., who had been for 10 or 15 years in the way of getting lime delivered to him at 28 to 30 cents per bushel; I found him in his meadow with five or six mowers, apparently luxuriating in the pleasure of converting a poor worn-out old field, formerly washed into gullies, and covered over with nothing but sedge grass, into one now yielding to the scythe a swarth that might well satisfy a Chester county farmer. I made some remark upon the abundance of the crop, to which he replied, "this is the effect of a *second* liming,"—repeating with a smile, a saying which he had often heard, "that if the *first* liming put a man *in* jail, the *second* would take him *out* again." He assured me, that wherever he had given his land a second liming, the effects were equally striking, and that his crop of corn the preceding year, on a field of about 15 acres, had yielded 55 bushels to the acre. His then growing crop of corn was on a field which had been limed the first time, about four years since, succeeded the next year by corn, the spring following by oats and clover, and shortly after cutting the oats, a second dressing of lime was applied. From the appearance of the growing crop, I have no doubt the product must have been from 50 to 60 bushels to the acre. A great portion of the farm presented equal evidences of improvement: but the most surprising part is yet to be told. This farm consists of about 400 acres, the soil *naturally* not the best. At the time he commenced liming, he had not for 10 years previous, *owing to its poverty*, pretended to cultivate anything more than a potatoe and corn-patch, which with a few tons of swamp hay, constituted his stock of provender for a horse and a few cows. He appeared very much to regret having lost 10 years of improvement. At the commencement, for want of experience, he had put on some lime in too wet a state, and it did no good; his neighbours discouraged him, by telling him "the soil was too poor to improve by lime, it must first have a body by some other, *more* active means; that lime *might* then improve it—but until then, he was assuredly throwing away his money." I need hardly say their scepticism is cured, and they are with an enlightened and commendable zeal, and with equal success, now following his example. The lime used in the above instance, in common with all other which we have access to, had also its portion of magnesia. Some six or eight years ago, I recollected to have heard him say, that since he had been liming, he could raise good corn and grass, but that his crops of wheat were not very much improved; this occurring to me at the interview just related, I reminded him of it, at the same time inquiring what was his present experience? His reply was, "that at that time he had limed none of his land but once, that *now* his crops of wheat were good;" inviting me at the same time to go with him to a field recently cut, but still in the shock. It was apparently quite a full crop for our best creek lands.

From all these circumstances taken into consideration, is it not evident that the different opinions resulting from the use of lime, must in a great measure, be owing to the different varieties of our soil? I believe it is a generally admitted fact, that plaster acts more powerfully on some lands than others, and also that on some lands it appears to have no effect whatever. Ought not these considerations to admonish us to qualify our publicly expressed opinions, when they are likely to come in conflict with the long established opinions of others? I hope our respected authors, whose views I have endeavoured to refute, will impute to me no other motive, than a desire to render harmless, opinions which, if followed, would paralize to an incalculable extent, our present progress in agricultural improvement.

A Deer Creek Farmer.

Harford county, Md., 10th of Second mo., 1843.

For the Farmers' Cabinet.

Kitchen Gardens.

"Horticulture, the attendant and embellisher of agriculture, which provides so many palatable and healthful additions to the substantial produce of the field, and correctors of the undue stimulus and acrimony of much animal food, merits all the fostering care which an uncorrupted and yet educated and refined taste has ever extended to it. A well cultivated garden, in due alternation of vegetable, fruit and flower, gives us poetry without its illusions—nature divested of her ruggedness, and art of its constraint."

I was so much struck with the beauty and truth of the above extract from Dr. Bell's preface to his Treatise on "Regimen and Longevity," that I concluded I would copy it, and send it to the Cabinet. I am an old farmer, and the longer I have lived, the more value have I placed upon my *Kitchen Garden.* By using this homely term, I would not by any means, exclude from its "border," the "rose, the honey-suckle and the tulip," and the thousand other kindred plants of beauty and perfume, that nature has thrown abroad for *woman* to care for, and manifest her taste in rearing. It is always delightful to see the farmer's wife and the farmer's daughter steal a half hour from her "in-door" duties, and go forth at "even tide," to plant—to weed—to train—"to dress and to keep" her own "rosy plantation." It seems to me a taste of this kind, cannot fail to be chastening in its effects; and it must have a decided tendency to multiply and elevate the enjoyments of the farmer's household. But this is altogether a digression. I was going to talk about the *value* of a kitchen garden—and behold, I have run off to the ladies and the roses! But *they* will forgive me—will not also the *Cabinet?*

I began this article with an intention merely to say, that I think farmers generally, place far too low an estimate upon the great variety of articles that may be produced from a tolerably well attended garden. An hour or two spent in it every day before breakfast, will keep a pretty good sized one in fine order; it will furnish the table with a great variety of the best vegetables that conduce to health and comfort, and will make it the *most profitable* spot on the farm. For to my certain knowledge, it will save the *pork tub* and the *meal barrel*, to an extent that the farmer himself will be surprised at, who has heretofore neglected this little spot. The season is approaching for attention on the part of farmers to this subject. Let its importance be properly appreciated.

Z. Y.

Gooseberries are much less apt to mildew, when trained so as to admit the air freely to circulate among the branches: the fruit too will be finer, if there be but one stalk in a hill, instead of a great cluster, as we often see. Soap-suds from the wash tub, sprinkled over them, for three or four weeks in succession, before blossoming, it is said are a great preservative, and will hardly fail to ensure "fine, fair, and large berries."

On the benefit of laying land to grass.

The great restorer to an exhausted soil, and enabling it to bear productive crops of grain, is *rest*; by laying it down with the artificial, or common grasses, for three or more years,—then ploughing it up again for a course of grain crops. The advantages obtained by thus devoting arable land to pasture, are incontestible, and are derived from two causes;—first, that the grasses, being in their nature somewhat distinct from grain crops, the decomposition, or the exercise of their affinities, and the required proportions of the elements of vegetables, must be equally as distinct. On instancing any of the clovers, saintfoin, lucerne, &c., we observe they send down their main roots deep into the soil; therefore, acquire a large share of their support from a stratum lower than the generality of grain; nevertheless, their side-roots, penetrating just under the surface, collect those other necessary portions of nourishment contained in the soil, which they do with facility in the first instance, because the land is fresh to their efforts, by their exerting affinities, differing from the roots of grain; but after a few years, these grasses grow stale to the land, and their efforts cease to be so successful as when first exerted; and from this cause, produce less and less, according to the nature of the plants. But in the same degree, the land recovers its freshness for grain, which, when again sown, yields with redoubled increase; but since some of the grasses approach very near to the nature of wheat, oats and barley, they cannot, on that account, effect so great a change; therefore, they yield a less favourable pasture for the growth of wheat, oats and barley, than if they were more opposite in their distinctive qualities—the clovers for instance.

The second cause of advantage is derived from the turf, the dead leaves and decayed stems; these latter, during the formation of the turf, falling down among the living stems and roots, create in time, by their decay, a stratum of dark mould, from the carbon yielded by the decomposition of the vegetable substances, and which decay is promoted by the close shade of the growing plants. Grass, whenever it takes root, begins forming a mould beneath, of a vegetable or decomposable nature; and therefore must, from this circumstance, acquire a part of its nourishment from the atmosphere; or this collection could not be made, except from what the plant may retain, of all dust or soil fortuitously dropped, the excrement of animals, &c., and with these, it establishes itself stronger and stronger; and this mould gets more and more blended with the soil by the rains, frosts, the workings of insects and worms, &c., proportional to the time it is suffered to remain unbroken up; but when this is done and ploughed under, it forms a rich coat of manure.

These, then, are the two causes of benefit arising from returning, for a period, arable land to grass; but it is necessary to observe, that in so doing, and with a real view to the improvement of the land, as well as to its present and future profits, the previous treatment must be taken into consideration, as also the management it ought to receive when in a state of pasture; because, if the grasses are sown upon an exhausted, foul soil, neither the immediate, nor the future produce can be great. And even if the produce of the pasture—the result of a good preparation—be carried off for green food, hay or seed, and no manure brought back, the grain crops will disappoint the expectations of the husbandman, whenever he returns it to arable. It is the fact, that land is like an animal fattening—the better and more liberally it is treated, the heavier will be the profit; and the husbandman should bear in mind continually, that "out of nothing, something cannot come:" therefore, if he is desirous of having large and profitable crops of corn or grain when his lays are broken up, his plan ought to be, to sow his grasses on a well cleaned soil, and feed off the crops, or manure liberally, if the hay or seed be more valuable to him when disposed of elsewhere; then his anticipations will be *as liberally* rewarded, and of this, he need never doubt.

In some countries, the first step towards breaking up old lays, especially when covered with a coarse and harsh sod, is to pare and burn the surface. To an inexperienced observer, such proceeding will certainly appear rash, since he would naturally say, the fire must destroy the greater portion of the valuable vegetable materials that had accumulated during the time the land was under grass; but from the continual practice of paring and burning with positive benefit, it appears nearly certain, that there cannot be the amount of loss which persons, on a first inspection, might with justice suppose; or if there is, it is more than compensated for, in another way. To be satisfied on this point, the merits and particulars of the paring and burning system, should be examined—thus, when a turf has become, by long lying, a favourable nursery for insects and worms, grubs, &c., which, on the breaking up again of the land, are ready to invade the fruits of the husbandman's toil, by instantly devouring what he may sow, when in a state of youthful vegetation, and in consequence, defeat his object in a greater or less degree, however rich the land might be—to obviate this evil, nothing seems to present so effectual a remedy, as the paring and burning of the turf, which destroys, in the most certain and expeditious manner, all insects, eggs and worms, contained therein. Again, if the land, during a state of pasture, has been neglected, and the seeds of weeds have been suffered to fall, the fire destroys them all at a blow. Also, very old and neglected lays are frequently filled with the strong, woody roots of large weeds and small shrubs, that from their solid nature, require years of common cultivation to decompose; and with land that is poor, the balance of affinities is too strong to decay, readily, the tufts of grass and weeds, even when turned under by the plough; which, therefore, with the woody roots, roll about under the plough and harrow for years, preventing the grain from growing healthily, by the too great hollowness they occasion to the soil; at the same time, existing, for the first year or two, a mass of rubbish, of half-alive, half-dead turf, which not only robs the grain of its nutriment, but keeps in existence the insects, grubs and worms, and exhibits to the eye after harvest, a worse surface for the plough to manage, than before it was broken up. To remove all these evils, fire has been resorted to, as the best and most expeditious agent; and thus far, the importance of paring and burning all very old and sour lays, is manifest. But in the operation, experience confirms the propriety of not carrying the heat of the fire to too high a temperature; and the criterion is, when the soil that is calcined with the turf, is still black; for it is admitted on all hands, that to carry the heat so far as to burn the earth *red*, is a loss, not only in the combustible materials, but injurious to the soil burnt, especially if that be a clay, which will thus be rendered but little better than brick or stone. With roots, turf, &c., the true object is, just to break down their texture by gentle combustion, and to avoid dissipating their gaseous materials, any more than is necessary to maintain the fire; at the same time, keeping the heaps covered by throwing on, with judgment, a portion of the adjoining soil, so as to arrest and combine with, as large a portion as possible of the soot, or whatever else arises in the form of gas with the smoke. By this means are formed dry, powdery materials, containing soot, wood-ashes, charcoal and blackened earth, which together form an excellent manure for all fresh broken-up lands. And the question is, how do the ashes operate as a manure? to which it is replied, these ashes, having had their old affinities overturned by the fire, and their new ones, which are most active when applied in their fresh state to the soil, act in part as lime and in part as vegetable manure; and with judicious after-tillage, a strong fermentation takes place; and then the fertilizing process commences.

The application of hot ashes, from the effect of paring and burning, and turning them in with the plough, is of great importance; even the *best lands*, when first broken up, from a state of pasture of only a few years standing, are found extremely altered, as respects their fitness to bear at once delicate vegetables; while the *poorer* lands must be in a worse condition still. Land of any description which has been unexposed to the sun, air, rains and frosts, for a few years, becomes raw, harsh, and cloddy; with all its former silkiness or delicate tenacity, or easy yielding to the pressure of the foot, gone. If a piece of earth be taken from under the turf and examined in the hand, it will be found porous, from the road-ways of worms, insects, and decayed roots; cold, raw, and hard, and bound together by the living fibres of the late grass; having its affinities in so strong a state of balance, in consequence of the same species of plants growing for a series of years on the same surface, that a clod of it, which is little better than a stone, until thoroughly reduced by the plough and exposure to the seasons, will resist decay and change for a great length of time: and whilst the land is in this state, it is impossible for it to afford nourishment to the roots of plants requiring nice cultivation; because, if they are sown upon it, it is too hard to admit the tender infant roots within those parts that have not been already searched and exhausted by the roots of grass; and where they have been so traversed by them, they have effected so strong a balance, that the roots of the young and delicate fresh plants, are able to obtain only the smallest portion of nourishment; and also, the former roots, rains and worms, having left the soil hollow and porous, the succeeding rains, instead of being absorbed, and thus retained by the soil, do, in a great measure, escape through the old channels; and these water-courses presenting only old saturated surfaces to the contact of fresh showers, arrest no new fertility, and what fresh air may gain access to the interior, by following the vanishing water through the soil, only meets with the same old chambers, whose sides have long since been saturated. From these circumstances, every fertilizing shower that falls, may be said to be lost; little or no fermentation takes place after it; or there is a complete stand-still; and therefore, no food is yielded to the infant plants, with their decomposing powers too weak to gain support by decaying the old grass roots, they consequently die of starvation; the old grass roots thus left, remaining in a state of comparative preservation, until some more powerful vegetable grows above them, or tillage or manure effects their overthrow. The seed sown on this exhausted soil might, and indeed it does grow at first, from its own resources, and from the air and moisture collected in the immediate neighbourhood; but the plants soon afterwards present to the eye a stand-still of all farther growth; maintaining a mere existence by the falling of a few timely showers perhaps, then perish.

The above aids are required by plants of delicate habits, and which need nice cultivation; the almost only vegetables of the edible and grain kinds that have sufficient decomposing powers to succeed, even on good land, when broken up from old pasture, being the hardy sorts of the potatoe, the tare or vetch, and the common grey pea; but it is far best, not to plant or sow *any* crop on fresh broken upland, until it has been properly prepared by the fallow-tillage, and manured with lime, ashes, &c., because the immediately depriving the land of the energies it may possess when broken up, retards the progress of its after improvement, in a more than two-fold degree.—*Bland's Agriculture.*

For the Farmers' Cabinet.

Lime.--Practice versus Theory.

In a late number of the Cabinet, your correspondent, Mr. Van Leer, says he has "repeatedly offered $100 to any of his neighbours, that would show to competent judges, where a second application of magnesian lime, (no difference how long before, or in how small quantities the first application was made,) had done any good whatever." I quite regret his not having extended the offer to *all* of his acquaintance, as $100 would not be unacceptable to some of us farmers, who are either obliged to sell our wheat at 75 cents per bushel, or wait for an advance in price.

If Mr. Van Leer would take the trouble to accompany me over my farm, I would not only show, but I think, convince him, that a second application of lime had *very* materially improved the quality and productiveness of the soil. When I purchased this farm, some eight or ten years since, I found considerable difficulty in collecting animal and vegetable manure, sufficient for a coating for five *acres;* I now find as little difficulty in manuring *fifteen.* The barn formerly held both hay and grain, and was some seasons not full. Now, it will not hold more than one-half, perhaps not that. I have been using lime for several years, nearly 1000 bushels per annum; last year, the quantity used, exceeded that amount. I have still more conclusive evidence at hand: I have, in every instance, reserved a portion of the field unlimed, in order to ascertain whether or not lime was of any benefit. As the former owner was of Mr. Van Leer's opinion, that lime did *his land* at least, no good; and he no doubt, was honest in the conclusion, for its maintenance did not harmonize with his interest, I was the more particular in making my experiments, staking out the part left unlimed, and frequently passing through the successive crops, in order to ascertain whether or not the lime had improved them, with some person unacquainted with the circumstances; the division line, however, between the limed and the unlimed, would be uniformly discovered—and not unfrequently, some 40 or 50 yards before we arrived at the spot; for, in many instances, the crop was more than doubled; and that too, where this was the second coat of lime. The quantity of wheat and oats in two of my fields last year, was not one-half as great on the unlimed as on the limed portion, the disparity being so perceptible, that the men in cutting across the fields, observed the difference the first stroke given with their cradles in it, without a previous knowledge of the cause.

Now sir, if this is not *prima facia* evidence, and that too, that will convince Mr. Van Leer himself, I would suggest the propriety of his extending the offer of his spare change, at least the *trifling* sum specified, to any one who will show to competent judges, any benefit derived from a second application of lime.

If lime was not universally known to benefit the soil, it is not *very* likely there would be now more than a thousand times the quantity used in this vicinity, than there was 15 or 20 years ago; for people are quite as much opposed now, to extra labour that does not benefit them, as they ever were.

As I do *not* anticipate receiving a "golden plough" for this essay, I will not give my name in full, until the *distance* of the $100 offer is extended.

Respectfully yours, &c.,

N. R. D.

Albern, Feb. 21st, 1843.

There are cases, in which a little common sense is of more worth than a great deal of calculation.

Isothermal Lines,

Are those circuits around the earth, where equal degrees of heat are experienced. These lines are parallel each side of the Equator, until the 22nd or 23d degree of latitude; at those parallels they begin to diverge, and at 36 degrees and 40 degrees, begin to be altogether irregular. In the Northern hemisphere, one line of equal annual temperature, runs through Rome and Florence, in latitude 43 degrees north; and through Raleigh, in North Carolina, in latitude 36 degrees; and through the Netherlands, latitude 51 degrees; and Boston, in New England, latitude 42 degrees. Edinburgh, in latitude 55 degrees, averages also with Boston. Uleo, in Lapland, latitude 66 degrees, ranges with Lake Winnepeg, in latitude 54 degrees. M. Kupffer, the Russian traveller, states that the temperature of the air and soil varies the most rapidly, near and beyond the 45th degree of North latitude in America and Europe. The difference will be more readily appreciated, by comparing Edinburgh, with all its elegance and luxuries, its palaces and halls of learning, its gifted scholars and polished society, with Labrador in the same parallel of latitude, on the eastern side of the West continent, locked in the silent thraldom of icy desolation; inhabited by a few straggling Esquimaux, in huts of snow, with no other clothing than the skins of wild beasts, and depending for subsistence on sea-dogs, and other ocean monsters.

The heat and weight of the atmosphere diminish, as we ascend from the level of the sea. These facts are proved by the observation of travellers, ascent in balloons, by the zones of vegetation on the sides of mountains, by the rarity and want of elasticity in the air, and by the excessive cold at great elevations, as well on those under the line, as those near the pole. At the foot of mountains, under the Equator, spring the fruits and flowers of the tropics; then follows a zone of the olive and the vine—then the broad leaved forests—then the fir and the pine—then the dwarf willows, stunted shrubs, evergreens and mosses; and last, the crests of never changing snow.

There are yet other known causes of the variations of temperature, but why the air in any given place should be mild and genial one day, and chilled by frost, or scorched by heat, on the next day following; or why one period should be occupied with one extreme, and the succeeding by another; or why one season should be racked with all extremes, in quick succession, are mysteries which neither chemistry, mathematics, nor natural philosophy have ever yet penetrated, or revealed. Electricity is known to have a powerful agency in atmospherical phenomena, and doubtless extends its invisible influence over every part of organised matter. It seems to be a kindred element with heat, and what are now the obscure results of their joint action, may at some future day, resolve the mysteries of meteorology, in connection with the variations of temperature.—*Hunt's Magazine.*

May, 1842.

To Prevent the Decay of Wood.

Take twelve ounces of rosin and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train-oil. Heat them slowly, gradually adding four ounces of bees'-wax, cut in small bits. Frequently stir the liquor, which, as soon as the solid ingredients are dissolved, will be fit for use. What remains unused, will become solid on cooling, and may be remelted on subsequent occasions. When it is fit for use, add as much Spanish crown, or red or yellow ocre, or any colour you want, first ground fine in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thin as you can; some days after the first coat is dried, give it a second. It will preserve plank for ages, and keep the weather from driving through brick-work. Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given; and in all compound machinery, the separate parts should be so varnished, before they are put together; after which, it will be prudent to give a third coating to the joints, or to any other part which is peculiarly exposed to the action of moisture; such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all timber which is near, or within the ground. Each coat should be dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should, for the sake of security, be heated in metalic vessels in the open air. For when oil is brought to the boiling point, or 600° of Fahrenheit, the vapour catches fire; and though a lower degree of temperature should be used in this process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

For the Farmers' Cabinet.

Disease of the Plum Tree.

Messrs. Editors,—My attention was called a few days ago, to an article in the New Genesee Farmer, on the "Black Canker," as it is called, in the plum tree. As there seems to be some difference of opinion in regard to the origin of the disease, I embrace this opportunity, through the medium of your valuable periodical, to make known the result of a few observations, on what I conceive to be the origin of this disease.

From the examinations which I have made of the trees in this vicinity, I have arrived at the conclusion that the disease in question, is produced by the deposit of the eggs, and the subsequent evolution of the *larva* of an insect, which I believe to be identical with, or allied to, the *ægeria exitiosa*, well known as the insidious destroyer of the peach tree.

Previous to my having detected this insect upon the plum tree, I occasionally met with it in my garden, in the act of collecting honey: when thus employed, it is rapid in its motions and difficult to capture. Amongst those taken upon the wing, or reared from the pupa, I have not detected a single female, and on examination, I find they agree in many particulars, with the figure and description of the male of the peach tree insect—"*ægeria exitiosa*,"—as given by Mr. Say, in his North American Entomology.

Many of the perfect insects varied in size; but this variation, I suppose to depend in a great measure upon the quantity of food afforded them while in the larva state. In some instances I have observed them to be larger or smaller, according to the size of the branch which they occupied.

One half of the follicle* which encloses the pupa of this insect, is formed by a slight excavation in the wood of the tree, sufficient to receive the lateral half of the body, the remainder is composed of small pieces of bark, connected together by the web of the insect, and resembles, in appearance, the follicles found at the root of the peach tree.

The pupæ have two semifascia of spines, upon each segment of the abdomen, except the three last, which have but a single row only, agreeing in this respect, with the pupa of the peach tree insect, above mentioned. The object of these spines appears to be, to assist in propelling the body forward, and to effect this, the insect has recourse to a rotary motion. In one instance, I made a small opening in the end of a follicle, next to the head, and in a short time the pupa escaped from it, while in an upright position, and in the manner before mentioned.

This accounts for the *exuvia*† being often found at some distance from the follicle, generally extruded half way through an orifice in the outer bark, in which position it is left by the insect, where it may frequently be seen at this season of the year.

On the 20th of last August, I examined a tree of the blue damson plum in my garden, which was very much diseased; larvæ nearly full grown, together with pupæ in different stages of maturity, were found in the same diseased branch; not more than three or four empty follicles were found, showing, that up to this period, but few perfect insects had escaped.

The pupæ and follicles which I obtained, were placed under a bell glass in my house, and I find by referring to my Entomological journal, that by the 2nd of September, they had all, with the exception of one, undergone their final metamorphosis: upon opening this follicle, I found the pupa had been entirely destroyed by a number of small larvæ, which occupied the interior; these in a few days changed into pupæ, without enclosing themselves in separate cocoons, as I have observed in one instance, of a parasite of the peach tree insect.

About the beginning of September, I renewed my examinations of the trees; no pupa were now to be found, the empty follicles indicating that they had all taken their flight. Here and there, I detected a larva, which was very feeble and appeared to be diseased; but they, notwithstanding, exhibited considerable tenacity, as they lived several days without food, under a bell glass. From the 1st of September until the beginning of October, I did not succeed in detecting any pupæ in the trees, but occasionally I met with a larva which appeared to be in the condition above mentioned. My attention being very much absorbed by professional duties about this period, I neglected to observe their farther progress, but I intend, during the next summer, to continue my researches, with a view to discover more of their habits and economy.

W. D. H.

West Chester, Pa., Feb. 1st, 1843.

We trust our friend will be good enough to furnish us with the result of his researches, in relation to this subject. Should they lead him, or be the means of directing the attention of others, to the true cause of a disease which is widely deplored, he will merit the thanks of every lover of fine fruit. Ed.

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[*] *Follicle*, a cocoon.

[†] *Exuvia*, the shell thrown off by the insect, when it assumes the winged state.

For the Farmers' Cabinet.

On the decrease of Fruit.

At the Quarterly meeting of the New Jersey Agricultural Society, held at Princeton on the 28th of the First month last, the following communication from Caleb Smith Green, President of the Society, was read. It has been kindly forwarded to us by the writer, and we hope it may lead to inquiries and suggestions, in relation to the subject matter, that may help to arrest the evils complained of.

In passing through some parts of New Jersey last summer, we were compelled to notice the unthrifty appearance of the apple orchards. There was a general scarcity of foliage. The leaf was pale and sickly, and inclined to curl at the edges and end: plainly indicating that something was at work, sapping the health of the tree. And these evidences of disease, were by no means confined to the apple orchards of New Jersey; they extended widely around Philadelphia; and we hope they will not fail to command, as they certainly deserve, the very close attention of practical men.—Ed.

One of the advantages which we possess in the present day, over our brethren in former times, is that of communicating our ideas and experience on agricultural subjects, and in return receive the views and experience of others, through the medium of the various periodical Agricultural papers, which are now published in our country. I desire to avail myself of this method of conveying to you some observations on the subject of fruit trees and their diseases, as they now appear in this part of Jersey; and solicit your investigation and communications on the subject. It is of great importance to this part of the country.

Cherries, plums, peaches, pears, apples, are all diseased. The Morella cherry trees are all dead; occasioned by many protuberances on the bearing twigs. The plums are fast following them of the same disease, there being very few in a thrifty bearing condition. The pears and apples are following, though with a very different complaint. Some years ago, a remarkably thrifty pear tree, with fruit of superior quality, exhibited rough places on the skin of the fruit, which cracked some depth into the pear, by which that side of the fruit was spoiled. Some time after, a year or two, the September butter pear was attacked in the same manner; the roughness covering the pear almost over, and cracking in many places, so that the fruit was, and is worthless. As the land was a close loam, a dressing of lime was given, at the rate of 50 bushels to the acre, with a good portion of manure, which put the land in an excellent state. Notwithstanding, the disease increased, spreading over the fall and winter Vergaloo, and many others, so much so as to make them of small value. The Seckel pear is the only kind that has escaped. Most of the pear trees in this district, are in the same condition.

But this is not the greatest loss.—The apple trees, for some years past, have been getting the same disease; the following facts have come under my observation:—In an orchard of 10 or 12 acres, having a large variety of fruit, the trees remarkably thrifty; on a loam and shell soil; sound land, excellent for wheat and clover; on which about 100 bushels of lime per acre, had been spread in twelve years, and well manured; twenty-three years since, the trees were set in the orchard; they are now at the best age for the bearing. The land has been kept under continual cultivation, except in the rotation one or two years in clover, that the soil might be kept open, and the roots have free course to spread and enlarge. The trees have grown accordingly, and the loss and disappointment have been so much the greater. The Newtown pippin, Cider apple, Bellflower, House apple, and Pelican, are nearly spoiled—the other kinds much injured. Greenings, and Old England Red Streaks, are the only winter kinds that are fair, and they are fairer and larger than common. On some fall apple trees, the fruit is very fair and good. These thrifty kinds have individual and separate rows, and run, some of them, through the orchard, between rows and kinds only fit for the pigs. I have been more particular in describing the state of the land, trees and fruits, than may appear to others necessary, in the hope of laying a foundation for investigation by others. My mind for some time, was impressed with the idea that *over liming* was the cause, but observing other orchards where the land had not been limed, in the same condition, I was compelled to give up that idea. Other reasons have occurred to me—as the seasons; but that will not suit the case, for many kinds have been diseased for five or six successive years, while others have escaped. Also the state of cultivation; but that will not apply, for one orchard of four or five acres, has not been ploughed for 20 years, and it is in the same condition. Being unable to assign any reason for loss of fruit, or give any remedy for the disease, I now, with deep interest, refer the subject to my brother farmers, for their investigation and elucidation, hoping that some light may have been obtained by some who have been more fortunate in their investigations than the writer; and as this is a leisure season of the year, they will give us their views this winter, to prepare us for spring operations.

In conversation on the subject, at the Agricultural Society, a gentleman asked, "Have you ever thought what effect chips and rotten wood might have, as a remedy for the disease on pears and apples? My reason for making the inquiry is, I made my wood pile close to a forlorn apple tree that bore miserable fruit. It has since borne remarkably fine."

This brought to mind, the great quantities of fine fruit produced in this part of Jersey, years back, when the soil had much vegetable matter, not quite decomposed; also the fine apples that have arrived in our towns from the western part of the State of New York, the last season; the land of which is still full of undecayed vegetable matter. These statements give rise to the following questions: Is the acid produced by the decaying vegetable matter, essential to the apple tree? Or is the open state of the soil of a new country, the cause of the thrifty state of the trees and excellence of the fruit?

For the Farmers' Cabinet.

Planting Corn.

Messrs. Editors,—As your valuable paper seems to be a depository for hints for the improvement of farmers, I thought I would refer to my mode of farming corn, which you can make such use of, as you think proper.

Immediately after planting, I go over the ground with a large harrow, to level it. This I find a great advantage, in regard to economy of time, as with the large harrow the work can be better done, in one-fourth the time it will take to go twice in the row, with the common scraper. There is an advantage too, in doing it immediately after the corn is planted, for the ground soon gets a crust on it, when it does not break up so nicely. And if it is left till the corn comes up, a boy is then wanted to uncover; a job which is seldom well done. And the ground too being entirely level, you may afterwards work much nearer the corn. I have also found it an excellent plan to pass over the ground after the harrow, with a light roller. It makes the earth compact around the corn, and hastens its sprouting. Further, I would say, drop plenty of grains in a hill—it is far better to pull up, than to replant.

S. C. W.

Chester county, Pa., Feb. 20th, 1843,

To take grease out of silk.—Apply a little powdered magnesia on the wrong side, as soon as the spot is discovered.

For the Farmers' Cabinet.

To take Honey.

Messrs. Editors,—Believing it to be our duty to communicate any information we may possess, in regard to subjects of general interest, I beg leave, through the columns of your widely extended and useful paper, to give what I consider an important discovery in the management of bees, an improvement that supercedes the necessity of the brimstone match—a resort both cruel and unnecessarily destructive, as I will endeavour to show. The method is simply this,—in autumn, when you think your bees have done their best, instead of killing them, put them out to *board* with their neighbours. This is very easily done in the following manner: place the hive you wish to take, close by one you wish to *keep over*; raise the edge of each a little, so that the bees can pass easily from one to the other; slightly raise the top of the hive you wish to take the honey from, and puff in smoke pretty freely for a few minutes, and the work is complete. The bees will take refuge in the neighbouring hive, and you have all their labour of the summer. The two families will be found to agree well, and to subsist on what one would have devoured; and will throw off earlier and larger swarms in the spring. If any doubt the above, I can assure them, "there is no mistake," as the plan has been fully tested by myself and others for two or three years, and found to succeed admirably. Bee owners will do well to drive all their poor hives in this way, if for no other purpose than to save their lives; they are not so likely to be attacked by the moth as when they are but few and weak. Bees should never have much of a stock of honey on hand in the spring—they will not do so well; having no place to deposit eggs, they will not raise young bees soon enough for early swarms, which always do the best. Should you think these hints worthy of a place in your Cabinet, place them there.

Respectfully,
Josiah Cowles.

Hamptonville, N. C., Feb. 23d, 1843.

Cure for Warts.—In our paper of January 8th, we published a recipe for curing warts. Mr. H. M. Sanborn, of Brookline, called on us the other day to say, that he had cured all the warts on the hands of his son, by the use of the means therein recommended. That is, he scraped a *carrot* and salted the scrapings for a poultice, which he bound on the boy's hand on his retiring to rest. This was several nights repeated. —*Mass. Ploughman.*

For the Farmers' Cabinet.

Culture of the Gooseberry.

As the time for planting and pruning trees, &c., is fast approaching, I desire, in this short communication, to call the attention of our horticulturists and farmers to the very useful, though much neglected, gooseberry. It is generally considered, that the large, or English gooseberry, will not thrive well in this climate. I am, however, inclined to think that this is, in a great degree, an erroneous opinion, founded more on hearsay than actual experiment: nearly as much depends on the proper culture, as on the climate. A gooseberry bush should always be trained to one stem, and planted in an open lot—never against a fence: it should be well trimmed every spring, and particularly in the middle of the bush, nearly all the wood should be cut out; never allow two branches to rub against each other;—dig well around, and manure the roots at the time of pruning. If these simple precautions are used, mildew will rarely or never be seen; while the fruit will be both large and delicious. This I know from experience; indeed, it is entirely by these means, that the English gardeners have been able to bring this fruit to such perfection, as is seen in the gardens of that country.

According to *Tusser*, the gooseberry only became a garden fruit in his time, which was in the reign of Henry the eighth. In his "Five Hundred Pointes of Good Husbandrie," he says:

"The barberry respis,* and gooseberry too,
Look now to be planted, as other things do."

The fruit was undoubtedly very small at this time, as may be inferred from the surprise expressed by *Pepys*, who lived about a century after the time of *Tusser*, on seeing gooseberries "as big as nutmegs." It is not at all uncommon in that country, to see them as large as our largest plums. "The largest gooseberry ever grown, was a handsome *yellow* fruit, called *Teazer*, which was exhibited at a show at Stockport, in July, 1830, and weighed 32 dwts. 13 grs. The heaviest *red* berry on record, was the *Roaring Lion*, exhibited at Nantwich, in 1825, and weighing 31 dwts. 16 grs. The heaviest *white*, was the *Ostrich*, 24 dwts. 20 grs., shown at Ormskirk, in 1832. In the same year, a seedling green was exhibited at Nantwich, of the uncommon weight of 30 dwts. 18 grs." To this statement of the weight to which the fruit has sometimes been brought, it may be interesting to add, that a seedling plant of reputation, has been known to produce, when sold in lots, upwards of £32. This was a rare case, indeed; but it is said to be not at all unusual for 20 guineas to be brought in, by the distribution of a single bush, in rooted parcels.

Nothing now yields a better profit than fruit. Why then, should not farmers devote a little more attention to the culture of fruit trees? While they afford ample remuneration in the sale of the fruit, for the labour bestowed on them, they also add greatly to the appearance and comfort of a dwelling.

Many persons who have but small gardens, might plant a quantity of gooseberry bushes; and if in this case, there was not much gain, there would undoubtedly, be an improvement in the fruit, as well as an improvement in the health and morals of the people; for "whatever makes men acquainted with the peculiarities of vegetable economy, in however small a degree, has a beneficial effect upon the heart and understanding."

W. P. H.

Manayunk, Feb. 22nd, 1843.

P. S. Can any of your correspondents furnish the readers of the Cabinet, with the most approved anatomical forms of cattle, particularly the milch cow; this was suggested on reading the article headed, "Native Stock," in the last number of the Cabinet.

Grafting the Lilac on the Ash.—Mr. Scott, of South Carolina, communicates the following to a Southern paper:

This season I grafted the different species of lilac on the common ash, in accordance with some information I received from a friend, (Mr. Wolf, jr.,) while I lived in Paris. I do not recollect to have seen any account of any one having tried the same in this country. We have grafted about three dozen ashes, varying from four feet to ten in height, with the common and Persian lilac; and I am happy to say that the result has exceeded my most sanguine expectations; for we have grown about 25 healthy plants, with branches from one to eighteen inches long, which I hope in an another year, will be covered with bloom. They were grafted in April, after the lilacs had made considerable shoots. I would, therefore advise, that the scions be taken off in January or February, in order to retard their vegetating too soon for the stocks. Would not the pendulous ash form a beautiful object, by having its branches grafted with Persian lilac?—*United States Farmer.*

---

* Raspberry.

For the Farmers' Cabinet.

Comparative Nourishment of different kinds of Vegetables.

If, as an article in the last Cabinet, signed Vir., states, "the differences of opinion with regard to the value of root crops, as cattle feed, are indeed about as different as light is from darkness," the following table, showing the comparative nourishment of some of the principal kinds of vegetable food, may possess interest. The table was formed by Boussingault, an eminent French chemist—and he tells us, that he compared the result of his experiments with the practical experience of farmers, in feeding cattle, and found "a most remarkable coincidence between the theoretical and practical inference." It is found in a late number of the Boston Medical and Surgical Journal, and is as follows, viz:

White French beans,	100
Yellow peas,	120
Farina of cabbage,	148
" of carrots,	170
" of wheat,	175
Wheat,	191
French wheat,	193
Rye,	200
Farina of barley,	212
" of potatoes,	225
Barley,	232
Indian corn,	246
Potatoes,	1096
Carrots,	1351
White cabbage,	1446
Turnips,	2383

"Thus we see, that 100 parts of white French beans, are equivalent in nutritive power, to 120 parts of yellow peas,—to 1096 of potatoes, and 2383 of turnips. A farmer, for example, in feeding cattle, would find that 120 parts of yellow peas, would go as far in keeping up the strength and efficacy of his cattle, as 2383 parts of turnips." Or it would require more than 23 bushels of turnips, or two bushels of rye, to be equal in nutritive power to one bushel of white French beans.

These statements, it is believed, may be relied upon as approximating the truth; though the fact, that it should require nearly two bushels of wheat to equal in nutrition one of beans, may be a little startling to the political economist. When *farina* is given, as of cabbage, potatoes, &c., the meaning is, that the article was dried and reduced to flour, by grinding, or otherwise.

If acceptible to the editors, occasional facts and suggestions, in connection with agriculture, may be offered for the columns of the Cabinet, (already so rich in original and practical matter,) by the writer of this, whose birth-place was a farm, and whose fondness for the pursuit, induces him to hope, that in this way he may contribute his mite towards the advancement of this ennobling occupation. Index.

Philadelphia, First mo. 30th, 1843.

For the Farmers' Cabinet.

A Chester County Pig.—A hog was slaughtered in West Chester on the 22nd ult., weighing 900½ lbs. He was bought by me two years ago, when a shoat, of six or eight months old, and I sold him in the tenth month last, to Benjamin Walton, of West Fallowfield, who fed him. When the circumstances are considered, that he was not castrated until the fifth month last, and then ran on grass with but very little extra feed, until I sold him, it may well be asked, "*Can it be beat?*" Judges are of the opinion, that had he been kept another year on a moderate allowance of food, and then fatted, he would have reached 1200 lbs. J. Fulton, Jr.

East Fallowfield, Pa., Third mo. 1st, 1843.

Agricultural Premiums.

At a meeting of the Philadelphia Society for promoting Agriculture, held at their room in Washington Hall, South Third street, below Walnut, March 1st, it was on motion Resolved, that premiums be offered for the following objects, for the year 1843, viz:

For the best managed farm, over 100 acres, $20.

For the second-best managed farm, over 100 acres, $15.

For the third-best managed farm, over 100 acres, $10.

For the best managed farm, from 50 to 100 acres, $15.

For the second-best managed farm, from 50 to 100 acres, $10.

For the third-best managed farm, from 50 to 100 acres, Colman's Agricultural Tour.

For the best managed farm, under 50 acres, $12.

For the second-best managed farm, under 50 acres, $8.

For the third-best managed farm, under 50 acres, Colman's Agricultural Tour.

The above premiums will be paid in money, or a medal of equal value, except where Colman's Tour is offered.

The decision of the Judges will depend on the manure used and economy of management, as well as on the neat and good condition of the farm generally, and the amount of its products.

Committee on Farms.—Aaron Clement, Isaac W. Roberts, Lewis Willard.

FOR CROPS.

For the best three acres of wheat, $8.

For the second-best three acres of wheat, Colman's Agricultural Tour.

For the best three acres of rye, $8.

For the second-best three acres of rye, Colman's Agricultural Tour.

For the best three acres of oats, $8.

For the second-best three acres of oats, Colman's Agricultural Tour.

For the best five acres of Indian corn, $8.

For the second-best five acres of Indian corn, Colman's Agricultural Tour.

For the best one acre of sugar-beets, $8.

For the second-best one acre of sugar-beets, Colman's Agricultural Tour.

For the best acre of ruta-baga, or other turnips, $8.

For the second-best acre of ruta-baga, or other turnips, Colman's Agricultural Tour.

For the best acre of potatoes, $8.

For the second-best acre of potatoes, Colman's Agricultural Tour.

For the best $\frac{1}{4}$ acre of carrots, $8.

For the second-best $\frac{1}{4}$ acre of carrots, Colman's Agricultural Tour.

For the best $\frac{1}{4}$ acre of parsnips, $8.

For the second-best $\frac{1}{4}$ acre of parsnips, Colman's Agricultural Tour.

In judging the foregoing crops, particular regard will be had to the mode and economy of cultivation, and also to the cleanliness and condition of the ground.

Committee on Crops.—Samuel C. Ford, Henry Chorley, Samuel Ritchie.

Aaron Clement, Sec'ry.

March 6th, 1843.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Third Month, 1843.

The second Annual Report made to the Board of Managers, by Dr. Kirkbride, in relation to the "Pennsylvania Hospital for the Insane," has, through the kindness of some friend, been placed upon our table.

Of all the improvements which the broad philanthropy of the present day has introduced, perhaps no happier illustration of their efficiency can be given, than the change which has taken place in the treatment of the Insane. Any of us who have lived so long, and will revert to cases of insanity—that most fearful of maladies, to which we are exposed—that came under our particular observation, or with the history of which, we became acquainted, fifty years ago, either in our own, or other countries, and will again recur to the treatment of similar cases, at this time, cannot fail to be forcibly struck with the great degree of success which has obviously crowned the general effort to mitigate and remove this deep affliction. Instead of the horrors, which it is not our intention now, even to name—of what were at one time, most appropriately termed *mad houses*, we find the sentiment has taken deep and thorough hold of the public mind, that the unhappy subjects of insanity, should ever be regarded as those for whom we feel a deep and rational solicitude, and to whom we are accountable for every act which has relation to their welfare, as we are to every other diseased individual. Any one who will look carefully into the statements annually made, of the condition of our well conducted hospitals for the insane, will at once perceive the efficacy of this improved mode of treatment, and will feel his very spirit cheered by the numerous manifestations of the triumph of *mind*—of *moral suasion*, over a government of *force*. Religion and philosophy have providentially penetrated with a ray of light, the darkest part of that path, which all are liable to travel, showing, that even there, the characteristics and the privileges, and the requisitions of humanity, are still to be acknowledged.

On taking up the report alluded to, we found our attention so arrested, that we were unwilling to lay it down, till its perusal was completed; and we are much in error, as regards the feelings of our readers, if this reference to the subject, shall prove unacceptable to them.

The Pennsylvania Hospital for the Insane, is situated about "two miles west of Philadelphia, between the West Chester and Haverford roads, and is on a farm of 111 acres, of fertile and undulating land, upon which are groves of fine forest trees, and streams of running water. Its buildings, with the pleasure grounds, garden and deer park, comprising 41 acres, are surrounded by a substantial stone wall, more than a mile long, and 10½ feet high." The wall is so judiciously arranged, as scarcely to be seen from the Hospital, and is therefore, not continually presenting to the patients that evidence of confinement, which is apt to be so unpleasant to a diseased mind. Neither does it interfere with a view of the fine scenery beyond it. This noble and imposing structure contains 201 chambers for patients and their attendants, with all the other appendages of an establishment of this character, and upon so large a scale. A fund specially devoted to this purpose, by the Pennsylvania Hospital, has been used for the purchase of the land, erection of the buildings, and complete organization of the concern.

The greatest number in the Hospital at one time, was 127; and this occurred towards the close of last year. Of the 299 patients who have been admitted during the two years of 1841 and 1842, that it has been in operation, more than one-third have been discharged *cured*, or *much improved*. But among these admissions, were 81 from the Hospital in the city who were considered decidedly incurable, and not offering the slightest chance for restoration. Deducting these, we find that more than 48½ per cent, of the original admissions into the new Hospital, have been cured, or much improved. A truly encouraging result

Dr. Kirkbride forcibly inculcates—and it can scarcely be too frequently brought to view—the vast importance of *early treatment* in diseases of the mind. The friend

' the patient, as well as the physician, have but too ten occasion to regret, when it is too late, that the st period for restorative treatment had passed, be- re proper means were resorted to. "Physical de- ngement is generally found to exist, and a *varied edical* treatment required for its removal." It is ac- nowledged that "there is no specific for the disease; id that each case requires its peculiarities to be stu- ed with as much care, and its remedies to be directed ith as much precision, as in any other species of ill- ess." Here, however, as it appears to us, almost ery advantage that can be hoped for, is offered to e unfortunate class, for whose benefit the munifi- ence of the Pennsylvania Hospital has been thus ex- nded. Writing, painting, drawing, and the study of rious branches of learning, tend to beguile the tedi- is hours. The deer park, and the pleasure rail road, -various occupations, both on the farm, and in-doors -frequent visits to almost every point of interest, ithin four or five miles; as to the Mint, the Water- orks, Girard College, &c., together with an untiring atchfulness and judiciousness of treatment through- it, have abundantly contributed to mitigate the suf- rings of the afflicted inmates of this Institution. he attendants, it is worthy of remark, have been nabled, during the past year, almost to dispense with ie restraining apparatus of all kinds. Its use is of are occurrence.

Had our limits permitted, it would have afforded leasure to have gone much more thoroughly over the round of the Report, than we have done. We leave ie subject with a very sensible remark, which we find n the 30th page. "Insanity is a disease of such fre- uent occurrence, that whatever is done by any one,) lessen its terrors and to alleviate the sufferings at- endant upon it, may ultimately be for the benefit of ome in whom he is directly interested."

"THE BIBLE IN SPAIN: or the Journeys, Adventures nd Imprisonments of an Englishman, in an attempt o circulate the Scriptures in the Peninsula; by George Borrow, author of the Gipsies of Spain." Published n Philadelphia, by James M. Campbell, 98 Chestnut treet, at which place, or at this office, it may be ob- ained.

This is a very amusing volume, giving a lively nar- ative of what occurred to the writer, during a resi- lence in Spain, whither he was sent by the Bible So- ciety in 1835, as its agent for the purpose of printing ınd circulating the Scriptures.

With this magnificent country, probably the most fertile, and with the finest climate in the world, we are not so familiar, as with many other countries of Europe; and the volume before us throws much light upon subjects, with which we would willingly be better acquainted. With a system of husbandry, as wretched as the soil is fertile and the climate delightful—and a population centuries behind the age, in the meliorating influences of Christianity, it is perhaps, not surprising that our author should have observed in his social intercourse with the Spaniards, much that is noble and to be admired, as well as much that is lamentable and reprehensible—many evidences of stern, heroic virtue, and abundance of savage and horrible crime.

Although as it at present exists, the work was written in a solitary hamlet, in a remote part of England, where he had neither books to consult, nor friends whose opinion or advice he could occasionally avail himself of, and under all the disadvantages of enfeebled health, the author has nevertheless thrown into it, an unusual amount of animation and good spirit, and never exposes himself to the charge of being dull and prosing.

☞ JOSEPH WILLIS, who has for several years acted as agent for our paper in Delaware and parts of Maryland, is *no longer authorised to receive monies on our account.* Such of our friends as have heretofore paid their subscriptions to him, can, by availing themselves of the kindness of post-masters, or by other means, readily communicate directly with this office. When remittances are made by mail, receipts will be forthwith returned.

OUR acknowledgments are due to H. L. Ellsworth, of the Patent office, Washington, for the "very beautiful sample of Kloss's white blue stem" wheat, furnished him by John Snyder, of Union county, Pa., as well as for his sample of Valparaiso wheat, just received from South America. They have been distributed among our friends.

The tobacco seed kindly forwarded, has also just come to hand—and we will dispose of it in the same manner.

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Where are manufactured, and for sale at low prices, Horse Powers and Threshing Machines, Fanning Mills, Corn Shellers, Straw and Hay Cutters, Horse Rakes, Ploughs of all kinds, and Harrows, Cultivators, Seed Planters, Cheese Presses, Churns, and every kind of Farming Implement generally in use. Also, every description of Implement made to order or repaired, by experienced workmen, and warranted. Slater's Patent Corn Sheller and Grinder; Plough castings of most kinds on hand. Also, a general assortment of garden seeds.

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☞ SHORT advertisements, the subject matter of which may be in character with this paper, will be inserted at the rate of one dollar for each insertion of ten lines, or less; and so in proportion for each additional line. The money to be paid in advance.

THE Hamburg, or Poland top-knot breed of fowls, is said to be among the most beautiful, as well as abundant layers. Inquiry has been made of us, where any of the pure breed can be obtained. Can any of our friends inform us?

THE quantity of rain and melted snow, which fell during the Second month, (February,) 1843, was rather more than two inches and a half. .... 2.54 inches.

Pennsylvania Hospital, Third mo. 1st, 1843.

"THE FARMER'S ENCYCLOPÆDIA

AND

DICTIONARY OF RURAL AFFAIRS:

Embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by Cuthbert W. Johnson; enlarged, improved and adapted to the United States, by a *Practical Farmer*, assisted by numerous scientific gentlemen, is now in course of publication by Carey & Hart, of this city.

"The work upon Husbandry, now ushered before the American public, is the production of an English gentleman of great intelligence, assisted by some of the best authorities upon rural subjects, in his country. By collecting and condensing the most interesting details relative to farming, chiefly derived from living authors, such as Professors Liebig, Lowe, Sir J. E. Smith, Brande, Youatt, Stephens, Thompson, Lindley, I. F. Johnson, etc., etc., he has been enabled to present the very latest information, and furnish a fund of matter which cannot fail to attract all who take an interest in rural affairs, so long studied and so thoroughly understood as these must needs be in Great Britain.

"The absence of speculative views, with the very practical and matter-of-fact character of the information given upon all subjects treated of, will perhaps be found to constitute the highest recommendation of this work."

It will appear in semi-monthly numbers, and in addition to numerous wood-cuts, will contain 16 beautifully engraved plates, and will be completed in 16 numbers, at 25 cents each.

The courtesy of the publishers has placed the first and second numbers of the above work on our table. In looking through them, we have been entirely disposed to believe that the promise to throw before the public one of the most interesting works on Agriculture, will be fully realised. As a book of reference, embracing every variety of subject important to the farmer, its convenience and value will present a strong claim for a place upon his book-shelf. "To render agriculture more productive and beneficial to all, it is necessary that its principles should be better understood, and that we should profit more from the experience of each other." This experience will be detailed to a very great extent, in the Farmer's Encyclopædia. The points upon which the gardener, or the more extensive farmer, would seek information, will be found happily illustrated. The dairyman, the grazier, and the fruit grower, as well as those who are curious in flowers or in grasses, will find ample gratification in this work. To it we acknowledge ourselves indebted for the leading article—and we think it quite an interesting one—in our present number. It is handsomely got up, and we sincerely hope it may prove, as we think it should, advantageous to the publishers, as well as to the public.

The early part of this month has been cold. At six o'clock, in the morning of the 2nd inst., the thermometer stood at 18 degrees, and on the 3d, at 14 degrees, Fahrenheit, in this city.

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For seven dollars paid in advance, a *complete set* of the work will be furnished; including the first six volumes *half bound*, and the seventh volume *in numbers*. Copies returned to the office of publication will be neatly half bound and lettered at twenty-five cents per volume.

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Irrigation.

I have long been of the mind, that farmers in this country, were not generally aware of the great benefits to be derived in many situations, from throwing, at a trifling expense, the water of their small streams over their grass lands. In the quarters of the old world, irrigation is practised to great extent. We all have heard of the wonderful fertility communicated to the lands adjacent to the Nile, by the overflowing of its waters. In Cairo there is a canal called Khalis, which is opened when the Nile is high enough, and from that the water is conveyed into reservoirs and cisterns, and is afterwards distributed into the fields and gardens, as occasions require. Wicker baskets, lined with leather, as stated by some modern travellers, are sometimes used in Egypt for raising the water, which is swung over the banks of the Nile by means of a rope, worked by the men, and emptied into canals, which convey it to the places where it is needed for irrigation. In China, this process has for ages been made use of, for increasing the fertility of their lands. "The waters of the chief rivers of the north of Italy, such as the Po, the Adige, the Tagliamento, and of all the minor streams, are employed in irrigation. There is no other country which possesses an extent of rich water meadows, equal to that of the Lombards. The entire country from Venice to Turin, may be said to be formed into one great water meadow: yet the irrigating system is not confined to grass lands. The water is conveyed into the hollows between the ridges, in corn lands—into the low lands, where rice is cultivated, and around the roots of vines. From Italy, the practice extended into the South of France—into Spain, and then into Britain. In the States of Lombardy, the water of all the rivers belong to the State: in those of Venice, the government extends its claims to that of the smaller streams, and even to collections of *rain water!* So highly, for the use of the cultivator, is water of every kind valued, in the north of Italy. It is necessary, therefore, in Lombardy, to purchase from the State, the water taken from the river: this may be taken by means of a canal, through any person's grounds, the government merely requiring the payment of the value of the land to the proprietor, and restraining him from carrying his canal through a garden, or within a certain distance of a mansion. The water is sold by the government at a certain rate, which is regulated by the size of the sluice, and the time the run of water is used: this is either by the hour, half hour, or quarter, or by so many days, at certain periods of the year: the right to these runs of water, is regularly sold, like other property. Arthur Young gives an account of the sale of an hour's run of water through a sluice, near Turin, which produced in 1777, 1500 livres. The rent of the irrigated lands in the north of Italy is, upon an average, more than one-third greater, than the same description of land not watered.

"In Bengal, wells are dug in the highest part of their fields, and from these, by means of bullocks and a rope over a pulley, water is raised in buckets and conveyed in little channels to every part of the field. No attempts at cultivation are here made, without the assistance of water, obtained by some mode or other. The art of irrigation was not confined to the old world. The Mexicans practised it long before the days of Columbus. They collected the mountain torrents, and conducted their waters to their lands in proper channels, with much care and address."—*See Farmer's Register,—May*, 1842.

In England, this mode of turning their streams to the advantage of their agriculture, is very extensively practised. Some of their finest pasture lands owe their productiveness to this artificial application of water, nature's grand medium of fertility.

They think no water so clear, or so full of impurities, as not to be useful for the purposes of irrigation. Sir Humphrey Davy thinks that in general, "those waters that breed the best fish, are the best fitted for watering meadows: but most of the benefits of irrigation may be derived from any kind of water." In the vicinity of Edinburgh, the Craigintinny meadows are made vastly productive by throwing over them the water from the city, which carries along with it in a state of semi-solution, the rich matter it has collected in its passage. "The grass is let every year by public sale, in small patches of a quarter of an acre, and upwards, and generally brings from £24 to £30 per acre, per annum. In 1826, part of the Earl of Moray's meadow fetched £57 per acre, per annum!"

In an address delivered before the Philadelphia Agricultural Society, in 1822, by N. Biddle, Esq., he states that "irrigation is probably, the most profitable of all modes of culture. Whenever the situation of land will permit its being covered with a stream of water, the direct nourishment to the plant, —the minute subdivision of the soil,—and the deposit left by the water, all combine to produce an amazing fertility. In Lombardy, for instance, the irrigated meadows afford four abundant crops of grass. In the dry climate of Spain, they are still more productive. It could scarcely be believed, were it not vouched by the personal observation of Arthur Young himself, that in the watered fields of Valencia, there are actually cut, four, five, six and seven crops of lucerne, from two and a half to three feet in height, and yielding *ten* tons of grass on an acre, at each cutting; so that on a moderate average, an acre yields no less than *fifty* tons of grass, and when broken up, gives three crops in the course of a year! It is not wonderful, then, that in that country the greatest efforts have been made, to water their fields—that reservoirs have been constructed, canals cut, wells dug, and machines erected for raising water from the rivers, and that whole rivers themselves, instead of hastening to the ocean, have been made to pause, and deposit their extraordinary fertility."

In the vicinity of Philadelphia, and in Jersey, I am aware of several successful attempts to turn the streams to this useful purpose. The product of the land is thus greatly increased, and at a trifling expense; yet in passing through the country, how numerous are the situations which offer every facility for taking advantage of this great, but too generally unappreciated, privilege.

Z. Y.

Woodbury, N. J.

For the Farmers' Cabinet

Lime and Magnesia.

To the Editors,—Owing to circumstances needless to mention, I have not for a few months past, enjoyed the perusal of your publication. The other day, however, a friend read to me an article contained in your number of last month, from the pen of Isaac Wayne Van Leer, by which I learn that the lime and magnesia question is still under discussion. It seems now that the war is not against magnesia alone, but lime also is boldly assailed. There appears also in your number for the present month, a reply to the candidate for the "golden plough," from a "Lancaster County Farmer," that might, perchance, have a slight effect to dim his "golden visions." Though sufficiently answered in some points, perhaps I may be allowed to present a few more facts and considerations, to your anti-lime and anti-magnesian friends.

Now, I am one who would neither have agriculturists so devoted to lime, as to neglect animal and other manures, nor so taken with the good qualities of the latter, as to despise the aid of the former; and I trust the day is at hand, when the comparative values, or rather, the virtues and effects of both and all, will be well understood. The recent work of Professor Liebig, is well calculated to form an era in the science of agricultural chemistry. Emanating from a man distinguished for scientific attainments, and its conclusions drawn and demonstrated according to the correct rules for scientific investigation, its statements merit the fullest confidence. It comes also from a foreign country, where *our Cabinet* and its discussions, perhaps seldom appear, and may therefore be fairly regarded as disinterested and unprejudiced.

Let us then go into a brief examination of these *momentous* questions upon the principles therein contained.

The uses of the alkalies and alkaline earths, soda, potash, lime and magnesia, may be considered as two-fold. 1st. As an actual food for plants, being taken up by their roots and incorporated into their substance, in a state of combination with organic, or other acids. 2nd. As component parts of the soil, sometimes improving its mechanical texture or consistency, but mainly operating by their alkaline properties to check the injurious *putrefaction*, and promote the healthy *decay* of vegetable matter, and the excrements of plants contained in the soil; thus yielding, as a result of this healthy decay, a constant supply of carbonic acid gas to the roots of growing plants.

In regard to the first, the following extracts from the work just named, may be placed before those who say magnesia acts as a *poison* to vegetation.

1st. "Phosphate of magnesia, in combination with ammonia, is an invariable constituent of the seeds of all kinds of grasses. It is contained in the outer horny husk, and is introduced into bread along with the flour, and also into beer. The bran of flour contains the greatest quantity of it. It is this salt which forms large crystalline concretions, often amounting to several pounds in weight, in the cœcum of horses belonging to millers."........."Most plants, perhaps all of them, contain organic acids of very different composition and properties, all of which are in combination with bases, such as potash, soda, lime, or magnesia."

2nd. In explanation of the reason why wheat will not grow in a soil of humus alone, Liebig says, "The cause is this,—the strength of the stalk is due to the silicate of potash, and the corn requires phosphate of magnesia, neither of which substances a soil of humus can afford, since it does not contain them; the plant may, indeed, under such circumstances become an herb, but will not bear fruit."

3d. "Most seeds contain certain quantities of phosphates. In the seeds of different kinds of corn, particularly, there is *abundance* of the phosphate of magnesia." Again, "It is evident the seeds of corn *could not be formed* without phosphate of magnesia, which is one of their invariable constituents."

"The ashes both of peat and coal, contain in general magnesia; hence their value as an ingredient of prepared night soil. When magnesia is not present it will be necessary to add some magnesian limestone or epsom salts." "Phosphates of magnesia and ammonia, form the principal inorganic constituents of the potatoe."

I might continue the extracts; but these are sufficient to show, how very "hurtful" lime and magnesia must be to plants when taken up as food; the following will show our writer's opinion of its usefulness in the soil.

"In a soil to which air has no access, or at most, but very little, the remains of animals and vegetables do not decay, for they can only do so, when freely supplied with oxygen; but they undergo *putrefaction*, for which air is present in sufficient quantity. Putrefaction is known to be a most powerful deoxidizing process, the influence of which, extends to all surrounding bodies, even to the roots and the plants themselves."..........

"The frequent renewal of air by ploughing and the preparation of the soil, *especially* its contact with alkaline metalic oxids,"—of which magnesia is one,—"the ashes of brown coal, burnt lime, or limestone, change the putrefaction of its organic constituents, into a pure process of oxidation; and from the moment at which all the organic matter existing in a soil, enters into a state of oxidation or decay, its fertility is increased."

In speaking of the decay of the excrements of vegetables, which when they accumulate in a soil act injuriously, and frequently to the exclusion, or "running out," of the plant which exudes them, he says: "The quickness with which this decay of the excrements of plants proceeds, depends upon the composition of the soil, and on its greater or less porosity. It will take place very quickly in a calcareous soil," (or I will add, a soil impregnated with magnesia:) "for the power of organic excrements to attract oxygen and to putrify," (decay*) "is increased by contact with the alkaline constituents."

The gentleman of the "golden plough," seems to view lime and magnesia, only in the light first above considered, when he asks, would it be advised "to apply 100 bushels of plaster to the acre?" And, by the way, if he accounts for the action of plaster upon clover, as his arguing would seem to indicate, solely by its affording, in itself, a food for that plant, he is there, at least, far behind the times. Tell him that its use is to combine with, and fix the ammonia of the rain water, &c., and that a small quantity upon the surface is sufficient for the time being, to answer that end; and let him learn above, that "alkaline constituents" should pervade all parts of a soil, and he will himself perceive why more lime is required than gypsum.

As ingredients for the improvement of the soil itself, much larger quantities of these alkaline earths may be necessary, than the plants require for food. But what is a large quantity? Our friend speaks of the best English soils containing but one or two per cent. of lime, and calls that a small quantity. Now upon calculation, it will be found that in a soil six inches deep, one per cent., considering the lime as heavy as the other earthy ingredients of the soil, is equivalent to about 175 bushels to the acre, and of course, two per cent. is 350 bushels to the acre; which is at least not so small as "50 bushels."

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* It is plain that the proper distinction explained in the work, between "putrefaction" and "decay," was here overlooked; "decay" being evidently in this case alluded to.

The action of lime and magnesia, as regards the promotion of decay, is precisely similar; the only difference being, that magnesia is more caustic than lime,—takes longer to carbonate, and is less soluble in water. Both lime and magnesia, when carbonated, possess in a degree, alkaline properties, and act in the same manner, but with less intensity, as they do in the caustic state.

The magnesia being longer in carbonating, perhaps more alkaline when carbonated, and less liable to be dissolved in water, and washed from the soil by rain, accounts for the experience of a neighbour, who told me he could see where a certain lime, whose stone contained from 30 to 40 per cent. of carbonate of magnesia, was put on 20 years ago, while the effect of another, containing no magnesia, spread five years since, had entirely disappeared.

That magnesian lime spread upon grass in considerable quantity, will, owing to its highly caustic nature, kill the grass in contact with it, argues nothing but its superior alkaline properties above mentioned. The same quantity or more, if incorporated completely with the soil, or spread in successive small portions at different times, would show no such effect, but would produce a soil, other things being the same, susceptible of the greatest degree of fertility. A sufficient quantity of ashes spread upon grass, will act in the same way as too much at a time of magnesian lime; yet who says that ashes are not most valuable?

If then the virtues of pure lime, lie in its alkaline properties—and magnesia is more alkaline than lime,—is it not consistent with the plainest common sense to declare, that less of the latter will answer, in place of the former!

Again, when we consider the general economy of nature, it is no far drawn inference to conclude, that whatever ingredients we invariably find in a fertile soil, are essential to its constitution; and if absent, must be supplied.

Liebig has given us the analysis of a considerable number of soils, amongst which, there is not one noted as being very fertile, but it contains a considerable portion of lime and magnesia. I will extract from some which bear particularly upon our question. The parts are stated in hundredths and decimals of hundredths, which in most I have reduced to bushels per acre. One soil contained lime 0.038, magnesia 0.147 or 25 bushels to the acre, potash and soda 0.09, and it is remarked: "This soil was much improved by manuring with lime and ashes," evidently to supply the lime and potash. Another soil contained lime 1.028, or 175 bushels to the acre; magnesia only a trace. In the subsoil of the same, was lime 0.296, magnesia .095, or about 17 bushels to the acre. The remarks are; "This soil produces luxuriant crops of lucerne and sainfoin, as well as all other plants whose roots penetrate deeply into the ground. The reason is apparent. The subsoil contains magnesia, which is wanting in the surface soil."

Another, a "very fertile soil," to which no manure had ever been applied, gave lime 5.88, or 1000 bushels to the acre, magnesia 0.84, or 147 bushels to the acre. Another very fertile field gave lime 1.2, or 209 bushels per acre, magnesia 1.04, or 175 bushels per acre. Another soil, "remarkable for its fertility, having never been manured or allowed to lie fallow, and yet has produced for the last 160 years, the most beautiful crops, contains lime 0.927, or 170 bushels to the acre, magnesia 1.16, or 200 bushels to the acre." Surely in 160 years, the poisonous qualities of 200 bushels per acre, of caustic magnesia, had time to show themselves! Yes, and they have shown themselves, in preventing the soil from being impaired in its fertility, by the accumulation of undecomposed and putrifying vegetable excrements. Another "very fertile" surface soil, gave carbonate of lime 3.77, or 665 bushels to the acre, carbonate of magnesia 4.066, or 700 bushels to the acre, while its subsoil gave 3000 bushels of carbonate of lime and 2000 carbonate of magnesia to the acre. Lastly, the "surface soil of alluvial land in Ohio, remarkable for its great fertility," gave lime 0.619, or 100 bushels to the acre, magnesia 1.024, or 175 bushels to the acre. What a pity, the enterprising emigrant to the inexhaustible fertility of the West, can not escape from magnesia!!

I will just suggest to friend Van Leer, that if he will have his soils analysed, he will not only find carbonate of lime, as hinted by the L. C. Farmer, but magnesia also, in all his good soils, and some other cause independent of these, to account for the inferior fertility of some limed parts of his land. And if he had just said what kind of rocks were in his friend's field, it might have helped one to guess what it was that had "run out," since he thinks it was not the lime.

In conclusion, let every farmer whose land is not calcareous, give it lime or limestone; if not magnesian, give it magnesian limestone, lime, or epsom salts; give it plaster to fix the ammonia of the atmosphere, and to retain that of the soil and its contents; give it potash in the form of ashes, to make the wheat stand stiff, and glaze the corn-stalks; give it animal and vegetable manures, to furnish ammonia, the phosphates and carbonic acid,—cultivate well, "and leave the rest to Heaven."

A Delawarian.

Mill-creek Hundred, Second mo. 23d, 1843.

For the Farmers' Cabinet.

Rust in Wheat.

Messrs. Editors,—Let me draw your attention to a paper containing observations on a wheat crop, communicated to the Philadelphia Agricultural Society, by Mr. David Comfort, a practical agriculturist, to whom the community are much indebted for various useful and interesting experiments. Mr. Comfort is also the person who has taken premiums for several seasons, of the Horticultural Society, for the growth of the Valparaiso squash; and is in all respects, a person of information and veracity.

He relates, at page 343 of the second vol. of the Cabinet, that "about the time when the wheat shot into ear, and while in blossom, owing to much damp and foggy weather, the leaf was struck with the red rust, and the straw with black mildew, in consequence of which the grain was shrivelled and light, at the common time of harvesting. The timothy grass growing amongst it, was now coming out in ear, and the heads were generally from nine to eleven, and some twelve and thirteen inches long; I therefore resolved to let the wheat stand, for the timothy to ripen. I gathered in my other wheat, and my neighbours gathered theirs, mildewed and rusty, with a light grain. In four or five days after I had gathered my other grain, I visited my wheat and timothy, and found it doing well; in five or six days more I found it improving finely; and in sixteen days after common harvesting was over, I cut my wheat and timothy together in fine condition; the grain of the wheat had improved 20 per cent.; the mildew and rust were gone, and the straw had a fine yellow appearance, not one head having fallen to the ground. The miller who ground this wheat for family use, informed me, that it was the best he had seen that season; and the miller who bought it, gave an advanced price, stating it was the best white wheat he had obtained that season. My desire is, if farmers are annoyed with mildew and rust, that they try the experiment and publish the result; although this wheat stood sixteen days longer than usual harvest, there was no shattering or loss of grain, and it appeared just the proper time for gathering it."

Now, not having before noticed the above communication, I am induced to inquire, if any of your readers have had the opportunity of testing its application to the case in point? One thing is pretty certain; when the crop is so far gone with the rust and mildew, it might be allowed to stand without the fear of being further injured by longer exposure; and it is easy to perceive that no loss will accrue from shattering, as the grains of wheat must still remain comparatively thin, and not liable to burst their envelope. There is just one remark which I feel inclined to make, without, however, offering any discredit to the account; it is this—there is no ground to expect that the straw of the crop, once so completely infected with the black mildew, would ever recover so far as to become of a fine "yellow appearance;" this must, I presume, be understood as speaking comparatively; for I have never yet found, but that the straw of a mildewed crop of wheat, has been radically injured, so as never entirely to recover its pristine vigor or colour, the hue still remaining pale and sickly, with no *glaze*, as indicative of health in uninfected crops. It is quite sufficient, if by permitting the crop to stand, it improve "20 per cent.," and be the best sample sent to the mill in a season of general rust and mildew, and no more ought to be expected; for rust is not the *cause* of disease, but the *effect*—the *cause* operating to the deterioration of the crop, perhaps long before the *effect* was visible, and inflicting an injury that cannot be entirely removed by any after process. Still the communication is extremely valuable, inasmuch as it is calculated to set people to thinking and experimenting—the chief use of the very numerous agricultural publications that are springing up around us, and to all which, I wish "good speed."

H. E.

Delaware county.

He is a public benefactor who, by the prudent and skilful outlay of his money in bettering its condition, shall make a single field yield permanently a double crop: and he who does this over a square mile, virtually adds a square mile to the national territory—nay, he does more, he doubles to this extent the territorial resources of the country, without giving the state any larger actual area to defend. All hail, then, to the improvers of the soil! Health and long life be their fortune—may their hearts be light and their purses heavy—may their dreams be few and pleasant, and their sleep the sweet repose of the weary—may they see the fruits of their own labour, and may their sons reap still heavier harvests.—*Blackwood's Magazine.*

For the Farmers' Cabinet.

Peach Trees.

Messrs. Editors,—In corroboration of the doctrine professed by your correspondent, A. T. B., on the peach worm and the disease called the *yellows*—see page 181, Number for January—I would call the attention of your readers to an interesting article on the same subject, by Mr. M. T. Kirkbride, of Morrisville, Bucks county, at page 347, second volume of the Cabinet, in which, after describing the peach fly, and marking very minutely the mode in which it deposits its eggs, &c.; the way in which the worms commit their ravages, and pointing out an effectual mode of entirely preventing all these evils, by applying slacked lime to the surface of the ground, and raising it high enough around the body of the tree, to prevent the rains from washing any earth against the tree, as this would afford a lodgement and protection for the eggs; adding, that he has found a peck of lime sufficient for trees two or three years old, he concludes with this remarkable sentence: "Although I have kept the fly at bay and preserved many trees from its ravages, yet we have not now a peach tree on the farm; that fatal disease, the *yellows*, cut them all off a few years since, and invariably takes them *now*, at one or two years old." Now I know not, if any thing can be added to render more evident the fact, that the worm is only the effect of disease, and that *without* its aid, the tree would be as effectually destroyed as it now is *by* it, according to the general belief.

Mr. Kirkbride has it in his power to interest your readers on another subject of very great importance, namely, an experiment which he has been conducting for several years, on a cherry tree standing near his house. If I understood aright, this tree had never borne fruit, although the blossoming was regular and particularly healthy: when, I think, three years ago, he took the opportunity of scattering over the blossoms, while the dew was on them, a quantity of pulverized plaster, standing on a ladder above the tree; the result was, a plentiful crop of fruit. The next year the experiment was omitted, when not a single fruit set. The last year was to decide the question by another application of plaster, but whether that took place, I know not—would Mr. Kirkbride be pleased to inform us, and favour us with his opinion of the matter? Also, say whether he considers the effect to arise from the chemical or mechanical action of the plaster? Possibly from the latter, screening the blossoms from the effects of a piercing atmosphere, by covering them with a coat of plaster. At all events, an article on the subject from such an enlightened friend of agriculture, would be highly esteemed by every reader of the Cabinet, especially by one who has the honour of his

Acquaintance.

March 15th, 1843.

Sugar in the Stalks of Maize.—Dr. Pallas, principal physician of the military hospital of St. Omers, addressed to the French Academy of Science, during the past summer, a memoir, in which he attempts to establish the following propositions,—viz: 1st, that the stems of Indian corn contain little or no sugar, before flowering: 2nd, that just at the epoch of flowering, only a mere trace of sugar can be extracted from them: 3d, that the same stems, from 20 to 25 days after flowering, while the grain is yet milky, contain one per cent. of crystallizable sugar: 4th, that still later, when the grain is perfectly ripe, the stems yield two per cent. of coarse sugar, besides four per cent. of rich molasses. The commission to whom this memoir was referred, (M. Biot, reporter,) however, very properly discredits these results, so contradictory not only to our theoretical views, but also to all former observations; as, for example, those of Prof. Burger, who affirms that the sugar is most abundant in the juice of the stem of maize, immediately after the expansion of the flowers, and that it diminishes as the grain is matured. The commission states that the experiments of Dr. Pallas on this subject, were so loosely conducted as to afford no results worthy of confidence.—*Silliman's Journal, for Jan.* 1843.

An Aphorism.—A Tradesman may incur indebtedness in the way of his business; for to enable a man to *give* credit, it is reasonable that he *receive* it. A farmer is justified in debiting his farm for what are justly termed lasting improvements—such as the purchase of manures, draining, extra cultivation, and the erection of necessary buildings: but no person is justified in going into debt for expensive food or clothing, in such times as the present; much more reprehensible would it be for him to indulge in expensive amusement of any kind whatever. Z.

Every man has in his own life follies enough—in his own mind troubles enough—in the performance of his duties, deficiencies enough—in his fortune, evils enough—without being curious about the affairs of others.

For the Farmers' Cabinet.

The Corn crop in Succession.

Messrs. Editors,—I have perused the "Dialogue founded on fact," in the Feb. number of the Cabinet, with great interest; for although I may fall under the denomination of those who find it easy to direct the labours of the agriculturist, themselves being unengaged in the practice—for I am in trade in a crowded part of the city—yet a great portion of my life having been spent in the active pursuits of husbandry, and as I continue to partake of its pleasures, by the perusal of the agricultural publications of the day, I am almost inclined to believe, that from the position in which I now stand, I am enabled to take a view, retrospective as well as prospective, favourable, rather than otherwise, to the developement of the science—just as the man who stands by, and looks on while others labour, is admitted to possess the power of discrimination, above those who are engaged in the manual part of the business, if our practical friends will allow me to make use of such invidious reasoning.

But my present purpose is to say, I am pleased with the mode proposed to raise corn every year on the same land, and have no doubt that by such means it might be accomplished with success. And here, if I may be allowed to theorise a little, I would ask, whether a plan might not be adopted, by which the manuring by foreign substances may be done away, and the crop itself be made to perform that office, with little labour and less expense? I am aware that our agricultural friends will have cause to smile at the notion, and hint that it "smells of the shop;" but if they will permit the suggestion to pass for as much as it is worth, it is all I ask! Well then, at pages 125 and 364, of the sixth volume of the Cabinet, are two very interesting articles, on the power of renovation, with which nature has been endowed by the all-wise Creator; and I remember at the time when I read them, I became convinced that it must be so, according to the fitness of things, by the following extract from the French publication cited on the subject. "In observing nature unassisted, or unthwarted rather, by the hand of man, in vegetable reproduction, it is found that when the seed is ripe, it falls upon the ground; and then the plant which has produced it, sheds its leaves, or falls itself upon it in decay, and covers and protects it from the weather, until germination has commenced and the young plant is able to grow up in health and strength, and full developement, to recommence the same routine of seeding and of reproduction; and from this it follows, that in nature, every plant produces its own soil or *humus*, and the earth only serves to *bear* the plant, and not to nourish it in vegetation." Now then, to carry the theory into practice, I would propose to your correspondent, J. P., a mode of renovating the corn-crop, without the aid of any foreign article of manure, and ask his opinion of the probable success of the undertaking. I say then, so soon as the corn is ripe enough to admit of the operation, cut off the tops in the customary way and secure them for fodder; afterwards, pluck the corn in its envelope when fully ripe, and husk in the barn at leisure, preserving the husks also for cattle feed; then in the autumn, pull up the stalks, cut the roots in pieces with sharp hooks, letting them fall into the deep furrows between the beds, and upon them lay the stalks, straight and at length, and bury them by turning two furrows over them, taking one from each side of the beds; allow them so to remain during the winter, and upon these ridges plant the corn in the spring, loosening the surface-earth, if need be, but not turning up the stalks; following the mode of after-culture laid down in the Dialogue: and I would venture to predict success to the enterprise. Now, if the land is thrown into five feet beds, with one row of corn on the centre of each, I would plant at the distance of two feet only, in the rows; so that, supposing the corn-stalks to be six feet in length when pulled up, there would be three thicknesses of stalks, besides the roots and the mould adhering to them, in every row.

In the same number of the Cabinet, I find a very interesting account of Bommer's method of making manure; could not this method, whatever it may be, be adopted for the purpose of aiding in the decomposition of the stalks and roots of the corn, and adding somewhat to their quantity, and perhaps quality? if so, there would then be no objection to turning them up in the spring, by splitting the ridges with the plough and returning them before planting, with the earth sweetened and pulverized; an operation equal in value to an extra manuring; according to what is recorded by Jethro Tull, quoted from Evelyn, who says, "If the most barren earth be taken and pulverized, and exposed abroad for a year and stirred often, it will become so fertile, as to receive an exotic plant from the farthest Indies, and cause all vegetables to prosper in the most exalted degree." It is also added, "when part of a field has been better tilled only for one year, than the rest, and the after management of the whole has been alike for six or seven years, the part once only better tilled, produced a crop to the last, with the difference very sensible at every harvest." If this be so, there is every reason to conclude, that by manuring with the corn-stalks and constantly tilling by the plough the land between the rows, corn may be grown with success for any number of years on the same soil: and I have only to regret that I am not in a capacity to put the theory to practice—will not some one of your readers devote an acre of land to the purpose, and deserve the thanks of the agricultural community! HARDWARE.

Commerce street, Philadelphia.

P. S. A friend reminds me, that my plan of burying the corn-stalk, would be to deprive the cattle in the winter-yard, of a great portion of fodder; to which I reply, not a great deal of fodder, but of much *amusement*, I admit, in picking over the stalks as they lie under their feet, covered with filth, and kicking about for months, like dried sticks. I calculate, that by burying them for manure, a tenfold profit, both of corn and good fodder, would be reaped, almost without labour and without price.

We would point the attention of our correspondent to an interesting article "on the culture of corn," as practised in Maryland, Virginia, and North Carolina, at page 151, of the second vol. of the Cabinet.—Ed.

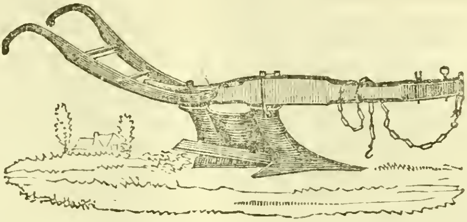
For the Farmers' Cabinet.

Plums.—The successful cultivation of the various kinds of plums in the neighbourhood of Salem, N. J., and the ease and cheapness with which they can be transported from thence by steamboat to market, should cause the cultivation of so valuable a fruit to be widely extended in that vicinity, and it is hoped that during the present spring, we shall see large accessions to the plum orchards of that interesting district of country. It appears that the insect which has been so destructive to plum trees in the interior of our country, has not committed its depredations within the range of the salt atmosphere of our river and bay;—perhaps they don't like salt,—if so, we may yet have a bountiful supply of good plums in the Philadelphia market, to the profit of the cultivator and the comfort of the citizen, who will not fail to purchase so palatable a fruit. A lot of 10 acres, set out with plum trees at 12 feet distance each way, would accommodate 3025 trees; which, at a peck each tree, would produce 750 bushels, and at a low wholesale price, would sell for more than a thousand dollars. The ground also might be cultivated to profit, and the trees derive a benefit from its being kept under tillage. Let us see it tried. B.

Plants and Seeds from the Exploring Expedition.—We extract from "A retrospective view of the progress of Horticulture in the U. States, during the year 1842," given in the January number of Hovey's Magazine, the following interesting article:

"An important addition has been, or ultimately will be, made to our collections by the labours of the Exploring Expedition. The number of live plants brought home, amounts to between 200 and 300 species; among them several new fruit trees from the East Indies. The collection of seeds embraces many hundred kinds, from all the various places where the Exploring Expedition touched; among them many of the ericas, from the Cape of Good Hope, and the splendid *Pinus* Lambert*iana*, and others, from the Columbia river. The seeds were placed under the direction of the National Institute at Washington, and have been liberally distributed by Dr. Pickering, the curator. For the growth of the live plants, a greenhouse, 50 feet long, has been erected on the vacant ground in the rear of the patent office. Part of this is partitioned off, as a stove or hot-house, for the tropical plants and fruits. These, when increased, will probably be distributed among the nurserymen of the country. The whole of the plants are under the charge of our correspondent, Mr. Breckenridge, from whom we hope to receive a list of their names, as well as some extracts from his original notes and remarks, on the many beautiful and grand productions of Flora, examined by him in their native habitats. This the government will not now allow him to do; but as soon as the injunction is removed, we may promise our readers some interesting articles from Mr. Breckenridge's pen."

Cows.—The following is from one of our exchanges—it is good advice. The point at which farmers are most at fault, and that for which our correspondents and hundreds of others blame them, and with reason too, is, that they overstock their farms—only half feed their animals—let skeleton cow-frames drag themselves over the premises, and complain because these dry bones do not give milk abundantly. Wherever cows are kept for the dairy, it is possible and proper—yes, it is a duty—to keep them well. This can be done. If you cannot keep four well, try two; the two, well kept, will give more income than four half-starved ones. The goodness of the cow is determined partly by her native properties—but the food also has much, and very much to do, in making her good or otherwise. Keep no more than you can feed well—very well.—*The Friend.*



For the Farmers' Cabinet.

The Subsoil Plough.

Messrs. Editors,—From all that I have heard and thought of the nature of subsoiling, I have reason to believe that the system is calculated to be of primary importance to our Western lands, by opening them to the influence of the atmosphere and enabling the crops, in a season of drought, to penetrate the earth in search of moisture, and when flooded with water, to allow it to pass away by a loosened subsoil—just as has been represented in the pages of the Cabinet. And for all the various crops, the potatoe, the cabbage, and the corn especially, this must be indeed a desideratum. But this very fact shows the necessity of the labour being well performed, and by properly constructed ploughs, which I fear is not to be expected, judging from the many plans for constructing cheap implements for the purpose, such, for instance, as the "heavy metal wheel set with slightly curved iron spikes or teeth," mentioned at page 79, vol. 5, of Cabinet, as also a harrow-tooth placed in a beam, or a simple foot of iron added, to penetrate into the subsoil a few inches only, without lifting it up and pulverizing it, which is certainly necessary, for the due performance of the operation: in short, I calculate we are not doing justice, either to the theory or the practice of subsoiling, by endeavouring to conduct the work in a way to escape expense in the labour required, or in the proper construction of the implement. I observe that it has of late been thought more advisable not to break up the subsoil, in the first instance, to a very great depth, it being natural to suppose that much of the richness of the surface-soil will go, the first year, to enrich the subsoil, and thus the benefit might not be so apparent as may have been expected; but it is feared that many of us would neglect the necessary periodical stirrings, and I therefore rather think that an effectual working at once would be likely to suit us best; at the same time, there appears a reasonableness in the suggestion.

The drawing of the Deanston subsoil plough, page 361, of the fifth volume of the Cabinet, shows it to be a formidable implement, not likely soon to make its way amongst us; its great weight, "300 lbs. of wrought iron, with a length of 12 feet and a half," which might well require the strength of six or eight horses, operating as an interdiction to its use under present circumstances. But I find that other ploughs of smaller dimensions, have been invented in this country, and that a size suitable to a single horse, is expected soon to make its appearance amongst us; these I should be glad to see, for I have a strong presentiment that the operation of subsoiling our new lands would be highly beneficial, assisting in their drainage, and correcting acidity: and this object I am now seeking, by asking information respecting the best constructed ploughs for the purpose; where they may be obtained, and at what price. Several of my neighbours also, are beginning to see the rationality of the operation, but like myself, are fearful that the labour of four or six horses, in a plough of such gigantic proportions, would be quite out of the question.

Be so good as to advise in the case, and oblige

Subscriber.

Michigan, March 4th, 1843.

The cut at the head of this page, represents Prouty's Patent Subsoil plough. They are made of three sizes—for four, two, or one horse; are light in working, but of immense strength, and very effective in all lands; a boy of 14 being competent to the task of holding them, except in very stony soils; nor is the labour of the team generally so great as that necessary to turn the first furrow of seven inches deep, on the same land: there is no doubt these ploughs will come into general use. They are to be obtained at Prouty's Seed and Implement store, No. 176 Market street, Philadelphia; the four-horse size $12; the two-horse $10; and the single horse, at $8; warranted to work well. Where also may be found, improved agricultural tools and machinery in the greatest variety, of first-rate workmanship, constructed of the best materials, and at moderate prices.—Ed.

For the Farmers' Cabinet.

The Air-tight Stove.

Mr. Editor,—I am indebted to the pages of the Cabinet for a knowledge of the Air-tight stove, and can best repay the obligation, by endorsing your *endorsement* in commendation of it, to the letter. But I have made an addition to the one I have, which will prove of great importance to those who have already purchased, or intend to supply themselves with these incomparable stoves, in the shape of an oval drum, one-third the size of the stove, which stands between it and the fire-board, to arrest the passage of hot air into the chimney; by which, I find that nearly a third part of the fuel is saved. The drum is not quite so high as the stove, but it is furnished with a partition down the centre, inside, closed at the top and open at the bottom; thus the current of heat from the stove, is first forced against the top part of the drum, and then downwards to the bottom, from whence it rises to the top on the other side of the partition, before it is permitted to escape into the chimney; all which causes a vast amount of caloric to be disseminated around the room; and thus, in a measure regulating the draught of air in the stove; preventing too strong an ignition, as is sometimes apt to take place, if the door be left too highly raised. And need I do more to recommend the use of this stove, with the drum attached, to the attention of your readers, than state the fact, that the consumption of wood in my stove—the fire continuing day and night, and never going out during the whole time—was exactly half a cord of hickory wood in three months. The peculiarity of this stove is, that the use of it may be continued long after others shall have become too hot for service, in consequence of warm weather: as it is often, that even during the summer and late spring, and early autumn, a fire on a damp and cold evening is found desirable; and here it may be obtained, by igniting a few chips or small pieces of wood for a few minutes; which can be instantaneously extinguished, by merely closing the door. In short, I have no doubt the use of the Air-tight stove will be found invaluable in warding off attacks of chill and fever, which often arise from sudden change of weather, from warm and dry to damp and cold, particularly on the evenings of spring and autumn. In justice to the inventor, however, it must be observed, that many stoves, bearing the name of Air-tight, are not of the proper pattern; mere external imitations, and by no means answering the proper purpose: the only security is in applying to the manufacturing agent, W. W. Hughes, No. 45, Walnut street, Philadelphia, where they may be obtained of the best materials, superior workmanship, and warranted perfect. Mr. Hughes is also agent for the manufacture and sale of Espy's Ventilator: can any of your readers inform me whether or not the invention is proof against a chimney which is an inveterate smoker, as I am tormented almost beyond endurance, with one of those "evils of life," for which I have never yet been able to find a cure.

Medicus.

Philadelphia, March 27th, 1843.

A City Street.

BY MARY HOWITT.

I love the fields, the woods, the streams,
  The wild flowers fresh and sweet,
And yet I love no less than these,
  The crowded city street!
For haunts of men, where'er they be,
Awake my dearest sympathy.

I see within the city street,
  Life's most extreme estates;
The gorgeous domes of palaces,
  The prison's doleful gates;
The hearths by household virtues blest,—
The dens that are the serpent's nest.

I see the rich man, proudly fed,
  And richly clothed, pass by;
I see the shivering, homeless wretch,
  With hunger in his eye;
For life's severest contrasts meet,
Forever in the city street!

And lofty, princely palaces—
  What dreary deeds of woe,
What untold, moral agencies,
  Their secret chambers know!
Yet is without, all smooth and fair,
As Heaven's blue dome of summer air.

And e'en the portliest citizen,
  Within his doors doth hide
Some household grief, some secret care,
  From all the world beside;
It ever was—it must be so;
For human heritage, is woe.

Hence is it that a city street,
  Can deepest thought impart;
For all its people, high or low,
  Are kindred to my heart;
And with a yearning love I share,
In all their joy, their pain, their care!

John Wilkes said, "the very worst use you can put a man to, is to hang him."

For the Farmers' Cabinet.

Joint-stock Companies.

I REMEMBER the rage for Joint-stock companies, which swept through England about the year 1825; and am tempted to copy from a record of the time, an account of "The Caledonian Dairy Company," for the amusement of your readers: its purpose was to supply the inhabitants of Edinburgh with pure milk. The land was purchased for £8,000, and £14,000 more were expended in the erection of a building, which is thus described:

"In the front of the edifice is a semicircular projection, in the centre of which is the principal entrance, having a column on either side for the support of a handsome pediment. The interior of this projection contains a saloon, correspondent with it in form, and through which the visitor passes into the great Byre, which is supported by two rows of cast-iron pillars; the stalls being divided by the same metal, and capable of containing 200 cows under one roof. It is 30 feet high, and from the centre of it rises a large dome, for the purpose of light and ventilation; it is also lighted, and air admitted at both ends and on one of the sides: and from a gallery over the principal door, the visitor has a pleasing view of the whole. The troughs are of stone, and each is supplied with a pipe, by means of which it can readily be cleansed, or water admitted for the common drink of the animals. Arched vaults extend below, through the whole length of the Byre, into which the urine passes and the dung is conveyed, from whence the contents are removed through a tunnel, opening on the main road.

"Over the saloon is a room for the Directors, and one above that for the servants. The other part of the building, that parallel with the Byre, contains the manager's house, counting-house, churning-house, engine-house to churn the cream, stores for potatoes, lofts for hay, steaming-house, stables for horses, a shed for the bull, and every thing that can be required in such a place; the land next the road being tastefully laid out as a lawn and shrubbery, with an ice-house for the milk in summer. But, like all other speculations of the kind, it did not answer! There were never more than 160 or 170 cows in the Byre, and these rapidly diminished in number, until the magnificent concern was so plainly a losing one, that it was abandoned by the company."

Now, with this enormous outlay for buildings, land, stock, &c., the wages of manager, servants, cost of food for cows, with wear and tear and casualties, what would be reasonable to calculate as the probable income for the support of the concern—the largest sum that could have been in the contemplation of the company? Why, supposing that each cow gave two gallons of milk a day, the whole year—which is a very large yield—the whole quantity for 200 cows, would be 146,000 gallons, which, at 16 cents per gallon, first hand, would amount to $23,360, about one half of which sum would go for rent of land and buildings, at 10 per cent. on the cost of erection; so that each cow would have to pay about $50 per annum, for rent of stall; leaving the other half to pay interest for stock, manager's and servants' wages, food, taxes, wear and tear and casualties, and a hundred other expenses not easily calculated! But the delusion was of short duration; a few months witnessed the end of all "Joint-stock companies," but the effects of the mania are still felt by hundreds of weak minded persons, who were so infatuated as to believe that the time was come for every one to make a rapid fortune, without inquiring who were to be the *contributors*, if every one was to be a *receiver*. We are all apt to say, such things will be a warning for the future; but there will be no such thing—we are all ripe for another start—it is only to show us that 500 per cent. is to be made by speculation, and the most sober minded amongst us, will be drawn from their "proprieties:" witness the *morus* mania, where all proposed to be *sellers* of trees, and no *buyers*, leave alone the making of silk, which scarcely an individual contemplated, except on a very small scale, to show how profitable it would be to purchase his stock of trees—*to keep them himself*, being quite out of the question. But there is one speculation in which we may all indulge—it is, in highly manuring and cultivating our lands—to be sure, we are promised no more than from 40 to 50 per cent. interest, on the capital invested, but until we can do better, suppose that we submit to do business in this small way? depending upon it, however, that a "Lo here!" will soon again be heard, and another rush will take place, with the same fatal termination! I am here tempted to relate an anecdote, the truth of which may be relied upon. On the south side of the Isle of Wight, England, there once lived a plain, honest, hard working country tradesman, who had, by dint of industry and keeping at home, saved up a considerable sum of money; but he was tempted to join a "Joint-stock company" in the neighbourhood, and adventured his all, in fitting out a vessel in the fruit trade, by which he was told he would double his money the first voyage.

But it so happened, that the ship was wrecked on her homeward passage, almost at his very door; the sea-shore being strewed with nuts, almonds, oranges, raisins, &c. The poor man thus lost his all, and was accustomed to walk the shore in despondency, lamenting his fate; but one very fine, calm morning, he fancied that the little rippling waves, which ran up and embraced his feet, were wooing him to make another spec, when he immediately drew back, and exclaimed, "Deceitful sea! thou wantest more nuts and almonds, dost thou!" Now, I candidly believe that this little incident has saved many in that part of the country from delusion and ruin, and that it is calculated to do much good in this country also, provided you consent to let it be known through the pages of the Cabinet; a work which has afforded me much useful reading and valuable information. John Taney.

January 28th, 1843.

For the Farmers' Cabinet.

To Preserve Eggs.—The high price and scarcity of eggs during the winter season, render it an object of importance to preserve them from decay during the season of abundance, for that of scarcity. This, like every thing else, is a very easy matter when we know how to accomplish it, and difficult when we are ignorant of the mode of effecting it.

The shells of eggs are porous, and by being long kept, the fluid contents evaporate gradually, and that in proportion as the temperature of the weather is increased; the vacant space occasioned by the evaporation, is immediately filled with air, and this air acts on the contents of the egg, and produces decomposition or rottenness. Now if the air can be prevented from entering through the shell, the egg will remain sound for an indefinite period—for decomposition cannot take place without air.

Réaumur tried varnishing eggs to preserve them, but he found the cheapest and most effectual method was to apply oil or grease, with which they were rubbed, or into which they were dipped.

The transpiration of matter from the egg, was proved to be as effectually stopped by the thinnest layer of fat, as by a thick coating, so that no sensible vestige be left on the surface of the shell. All sorts of fat, grease or oil, were found well adapted to preserve eggs; they were preserved for nine months, as fresh as the day on which they were laid. Other plans of accomplishing the same purpose might be stated, but the above is so simple, cheap and effectual, that it is deemed unnecessary. Q.

Mississippi Almonds.—We are indebted to our friend and brother craftsman, M. Shannon, Esq., of the Vicksburg Whig, for a present altogether novel to us—it being a handful of *soft-shelled almonds*, the produce of his own garden.

Mr. Shannon informs us that he has but one tree—that its growth is tolerably thrifty, but that the greater part of the fruit drops off before maturity. This year he has gathered more than a pint of the shelled fruit—last year, half that quantity. Those of last year, after being dried, were as fine as any ever imported. He had also a tree of the hard or bitter almond, which flourished as finely as any peach tree—it was loaded every year with fruit that ripened well—but, as they were of little use, and brother Shannon had but little ground to spare, he dug it up.

An almond, as every one perceives, differs but little from a peach-stone—and the skin covering it, is very much like the pulp of a peach, except that it is thin. These, at least, which we have received, have but a thin coat, with a slight fuzz on the surface, considerably withered, and, when pulled off, it has much the appearance and smell of dried peach nuts, but is bitter to the taste. The tree, too, resembles a peach tree so much, that the difference can hardly be perceived. It can be budded on a peach stock as easily as one peach can be budded on another.—*S. W. Farmer.*

Gathering Potatoes.—Irish potatoes, if it is desirable to have them in all their excellence, should never have the sun shine on them after they are dug, and should be exposed to the air and light as little as may be. Potatoes pitted or buried in holes in the field, retain their freshness and good qualities much later than those put in open bins in the cellar; and the farmer will always do well to have a few pitted for spring use. The necessity for this may in a great measure be obviated, by lining the bottom and sides of a bin with turf, and when it is filled, covering it in the same manner. Potatoes will keep perfectly sound and good for years, if placed so low in the earth as to have a temperature too low for vegetation. Experiments made in a compact soil, on the north side of buildings or walls, show that four or five feet will usually be sufficient; in a lighter or more porous soil, a greater depth is requisite. No water in any case should stand on potatoes, as it will soon destroy them. If potatoes are dug and pitted early, there should be an opening made at the apex of the heap, and filled with a wisp of straw, to keep out the rain, but at the same time to allow the heated air to pass off.—*American Farmer.*

Treatment of Domestic Animals.

Editors of the Cabinet,—The proper treatment of the diseases of domestic animals, is probably less understood than any other department of rural economy; and so long as no efforts are made to class it among the professions, and one worthy too, of the attention of scientific and educated men, must there be losses sustained of valuable animals, from injudicious or dangerous remedies. In England there is more than one veterinary school, where the anatomy, physiology and diseases of animals are regularly studied, as in our schools of medicine; and there is no doubt that in our own country, a well qualified person in any good farming district, would receive ample encouragement as a veterinarian. Is it not worthy of the attention of our agricultural societies, to send one or more persons to England to go through a course of study, in one of her schools, where I am told the advantages are all that could be desired.

In the absence of much of this scientific knowledge, it may be well to record in our agricultural papers, accounts of maladies of animals, with their treatment and results; *pro bono publico*, to throw one's experience into the common stock.

The "M'Elroy cow," of whose great milking qualities a short account was published in the Cabinet last spring,* had a fine bull calf on the evening of the 7th of the present month, and appeared well till the morning of the 10th, when upon going into her stable, she was found in great pain, moaning, uneasy, and refusing to eat—her horns down to the roots were very cold,—the pulse quick, strong and full, and slightly swelled. I immediately gave her one and a half pounds of epsom salts, with a small portion of ginger; opened the holes in her horns, which had been previously bored, and applied a small portion of turpentine back of her head, this latter being a common remedy here, for an ailment probably miscalled hollow-horn. In the course of two to three hours, the pain still continuing, and the medicine not having operated, judging from the pulse, there was considerable fever, I bled her about seven pints. She ceased moaning, and laid down, appearing easier. In the course of another hour, I went down to give her another dose of salts and found her dead, being about five hours from the time she was first discovered.

In the treatment of this cow, and my animals generally, I am guided by Youatt, and heretofore with success. The symptoms here corresponded exactly with those which he ranks under the name of puerperal, or milk fever, and although he says, "this complaint generally attacks cows in very high condition, and where there is of course a predisposition to fever; yet deep milkers are also equally subject to it." He says, "all cows have a slight degree of fever at this time; a very little addition to that, will materially interfere with the secretion of milk, and perhaps arrest it altogether, and the throwing back upon the system the quantity of milk which some of them are disposed to give, must strangely add fuel to fire, and kindle a flame by which the powers of nature are speedily consumed." "The disease is an inflammatory one, and must be treated as such. There is no malady which more satisfactorily illustrates the necessity of endeavouring to subdue, as speedily as possible, every inflammatory complaint by the *free* use of the lancet, for all of them run their course with a rapidity which a person unaccustomed to these animals, and which the human practitioner especially, would scarcely deem possible." "The small bleedings to which some have recourse, are worse than useless, for they only increase the natural tendency of these animals to take on a low and fatal form." So much for Youatt.

It will be seen he relies on purging, and particularly deep bleeding, and yet I have no doubt the latter contributed to the fatal termination of the complaint. She was always in very poor condition, and I always found it impossible to have her otherwise; all the feed given seemed to go to aid the lacteal secretions, and she constantly looked more than half starved. Although there may be *some* fever in cows of her condition, at such times, experience in this case would seem to say, there is not sufficient to make it necessary to exhaust the strength by premature bleeding, but rather to rely on the operation of the medicine, repeating dose after dose, till an effect is produced, or even to hasten it by injections.

On examination, the rumen, manyplus and abomasum, or fourth stomach, were greatly distended with food, while the rectum, or large intestine at the termination of the digestive canal, was empty, showing the disease to have been an obstinate constipation. It should also be mentioned, that no milk, or only about a pint, could be drawn from her, and her udder was hot, as if inflamed.

The death of the M'Elroy cow, is the more to be regretted at this time, as I had intended to offer her when pasture came, to the disposal of a committee of the Philadelphia Society, to test her milking properties, either here or at any other place, where she could have an impartial trial, and with the view of establishing her claim to the very liberal offer, published last spring in the Germantown Telegraph, of a premium of several hundred dollars, for any cow, neither *Durham* nor *Devon*, making over 12 pounds of butter in a week. The account of her milking published in the Cabinet last spring, stated, that from pasture alone, she made within two ounces of 14 pounds of butter, and her former owner stated, that with moderate feed, she made for six successive weeks, 16½ pounds per week. I had hoped to have a portrait of her by Woodside, for the Cabinet, to accompany the statement of such a proposed trial; but as it is now too late, I would refer the readers to a portrait of the Alderney cow, "Lady Emily," in volume 5, page 153, which is pronounced by all who saw her, a most excellent likeness. I myself doubt, whether he could have drawn her more to life; the hollow back, the large overgrown belly, light thigh, the head, horns and face, having a most remarkable resemblance. Indeed such a shape always speaks for itself as regards milk.

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* See vol. 6, page 382.

I have the satisfaction however, of having secured from her two heifer calves, by "His Grace," which give great promise of sustaining the reputation of their distinguished dam, as milkers, while they surpass her in comeliness and beauty.

Would it not be well for Agricultural Societies, in their list of premiums to pay more attention to the subject of *milking* stock, by offering distinct premiums for the best milkers, and giving this department to the charge of a *special* committee. They could then be informed beforehand, where there was a cow to be offered for competition, and could satisfy themselves at their leisure, either by repeated visits, or by placing her for a definite time with some disinterested person; it being common with some, to disbelieve any statement of a yield over seven or eight pounds per week, and who would be satisfied with nothing else than the report of an impartial committee. In the vicinity of large cities, milk and butter are certainly far more worthy of attention than beef, or feeding qualities, and yet in the award of premiums, they receive the *least* attention; a cow low in condition, and with the points indicating milk, has generally a poor chance for competition against a cow with round barrel form, broad loin, heavy buttocks, and other indications of a good feeder. Ought not the highest premiums of every agricultural society be disposed to the encouragement of that branch or division of farm management, most important to the farmers among whom it is located. In the far West, where they raise and graze stock for the Eastern markets, milk and butter should receive only secondary attention, but here they are entitled to the primary notice, and the largest premiums of our agricultural societies.

P. M.

Allerton Farm, near Westchester, Chester county, Pa., Third mo. 13th, 1843.

Siliceous Stone--tripoli.

There are rocks in the interior of continents, at various depths in the earth, and at great heights above the sea, almost entirely made up of the remains of zoophytes and testacea. Such masses may be compared to modern oyster-beds and coral-reefs; and, like them, the rate of increase must have been extremely gradual. But there are varieties of stony deposites in the earth's crust, now proved to have been derived from plants and animals, of which the organic origin was not suspected until of late years even by naturalists. Great surprise was therefore created by the recent discovery of Professor Ehrenberg, of Berlin, that a certain kind of siliceous stone, called tripoli was entirely composed of millions of the skeletons, or cases of microscopic animalcules. The substance alluded to, has long been well known in the arts, being used in the form of powder for polishing stones and metals. It has been procured, among other places, from Bilin, in Bohemia, where a single stratum, extending over a wide area, is no less than 14 feet thick. This stone when examined with a powerful microscope, is found to consist of the siliceous cases of infusoria, united together without any visible cement. It is difficult to convey an idea of their extreme minuteness but Ehrenberg estimates, that in the Bilin tripoli there are 41,000 millions of individuals of the *Gaillonella distans* in every cubic inch, which weighs about 220 grains or about 187 millions in a single grain. At every stroke therefore, that we make with this polishing powder, several millions, perhaps tens of millions of perfect fossils, are crushed to atoms.—*Lyell's Geology, vol.* 1 *page* 52.

Those who wish to raise bountiful crops of grass, must not be parsimonious of seed for be sure, there will not be more spears of grass than there were grass seeds sown Orchard grass combined with clover, has commended itself much to many who have tried it; and in some soils it is found to answer better than timothy. Some say, the more *kinds* of grass seed sown together the more pasture and hay will be produced. O.

For the Farmers' Cabinet.

Limestone of Mannington, Salem county, New Jersey.

On the farm where I reside, the stratum is more than 25 feet thick at the point where I have been digging, having penetrated that far and found no bottom; 15 feet of which lie above spring water. The top of it lies at various depths, from six inches to five feet below the surface of the earth.

At Aaron Lippincott's marl-pits, half a mile N. W. from the abovementioned place, the marl is overlaid by a thin vein of the same stratum, not over three or four feet at its greatest thickness; thus proving the dip of the line and marl towards the south-east, as suggested by Professor Rogers, in his report for the year 1840, a part of which for a full description of said lime, I herewith transcribe:

"*Geographical Extent.*—The general range of the stratum is from a point a little north-east of Salem, past Woodstown, Mullica-hill, Blackwoodtown, Vincentown, and New Egypt, to Prospertown; beyond which, I have been as yet unable to discover a trace of it. But it is not to be inferred that it exists as a stratum of much extent or importance, throughout all this long line. It has hitherto been detected at distant points only, and nowhere but in Salem county, does it cover a wide area, or possess more than a very insignificant thickness. It lies along the south-eastern edge of the visible marl tract, and if it dips at all, it is towards the south-east, to underlie the ferruginous sands. At its greatest width, four miles north-east of Salem, it can be traced over a breadth of three-fourths of a mile, its thickness in the same neighbourhood, as proved by a well sunk through it, is as great in one spot as 20 feet; though elsewhere in the same vicinity, it is not more than six or eight.

"*Composition and aspect.*—This rock is usually a soft yellowish, or straw coloured limestone, with a structure varying from subchrystalline to coarsely granular. It is often replete with organic remains, the disintegrated shells and corals, and other fossils, composing a considerable portion of the mass. Much of the rock contains impurities, as sand, clay, and oxide of iron; and its value as a limestone is very variable. At times it is little else than a sandstone, in which the sand is cemented together by a trace of lime. It occurs with this character in loose rounded masses, resting above the marl at Woodstown. Again it exists as a firm calcareous rock. This is its state in some places near Salem, in Mannington township. In the accompanying analysis, the composition of the leading varieties of the rock may be accurately seen. This limestone is nowhere to be found in thick massive strata; on the other hand, it occurs only in thin horizontal beds, or irregular layers, not more than four or six inches thick, and commonly separated by a thin parting of sand and carbonate of lime, in small grains, to all appearance an incohering mixture, of the same materials that form the rock itself. The more calcareous beds, have not unfrequently some resemblance to some of the thin oolitic strata of England, in consequence chiefly of the granular form of much of the carbonate of lime; together with the innumerable fragments of fossils, which sometimes form almost half the mass. Unless attentively observed, this rock will appear much more sandy than it actually is, owing to some of the carbonate of lime being in the shape of small round yellow grains, like those of sand. Occasionally, especially near the bottom of the stratum, where it adjoins the marl, it contains a sensible proportion of the green grains, sometimes in such abundance as to unfit it for being burnt into lime, the potash and other ingredients of the green mineral, serving to vitrify it and form a kind of slag.

"On the farm of David Petit, in the vicinity of Mannington Hill, the limestone displays itself in considerable thickness, the layers of the rock alternating with the calcareous sand as described above. This locality is about a mile and a quarter south-west from the poor-house.

"The following analysis exhibits the proportion of carbonate of lime in the limestone of this neighbourhood.

Composition 100 parts:

Carbonate of lime,	77.80
Carbonate of magnesia,	1.20
Alum and oxide of iron,	1.80
Insoluble matter,	17.80
Water,	1.12
	99.72

"This stratum is destined to prove of signal service to all the region adjacent to it; for lime is particularly useful upon lands destitute of calcareous matter, like some of the more sandy tracts of New Jersey. The lime from this rock in Salem, is growing rapidly into use. I would recommend—as promising to prove highly beneficial—the soft, friable, unconcreted parts of the stratum, which lie between the solid layers, especially near the bottom of the formation. Being already in a pulverulent state, and composed chiefly of carbonate of lime, with occasionally some of the grains of green marl, the whole must constitute a *calcareous marl*, admirably adapted to meliorate the lands of the surrounding country.

"Both the *limestone* and the *calcareous sand* occur well developed on the farm of Job Ridgway, near Mannington Hill. The rock at this place has a subchrystalline texture, being tolerably well cemented; towards the centre of the layers it is of a bluish colour; it is quarried to some extent and burned on the spot, yielding a very good lime."

Its application and use.—In the winter of 1837, I hauled about 12 two-horse wagon loads of the limestone and the intermediate layers of carbonate of lime and sand, of about 20 bushels per load, on a part of a field that I planted with corn the spring following, and on measuring the product, I found it was a little, and but a little in favour of the limed part. In the spring of 1838, I sowed oats on the same field, which grew so much larger on the limed part, that the difference in the size of the stubble, after gathering the crop, was plainly perceptible. In the fall of 1838, I manured both parts about equally, and sowed white wheat; on the part that was limed, the wheat was injured but little by the freezing and thawing of winter, in comparison with the part not limed, which was in some places, and adjoining the limed part, where the ground was low and wet, nearly all heaved out, or winter killed. The limed part produced nearly double the quantity of wheat to the acre, of the part not limed, the whole averaging 20 bushels.

In the spring of 1839, I sowed clover and timothy seed on the same field; the yield of which was at mowing time, in 1840, and also the second crop, or seed clover, nearly double on the part limed. In the summer of 1841, I mowed the field for the third time, and found the like difference. In the winter of 1842, I covered the remaining part of the field with the same kind of lime, and the spring following I planted corn on all the field—the yield was as follows:—on the part limed in 1842, the product was not more than two-thirds as much as on that which was limed in 1837; the two parts were about equally productive, previous to the first application. Thus it would seem that the liming was of but little benefit to corn ground the first year; but on oats, it has uniformly increased the crop nearly one-third; and I have not observed, after various experiments, that an additional quantity, above 20 loads per acre, is of any advantage, further than to act mechanically on the land, it being extremely loosening on a stiff clayey soil.

The layers are many of them a foot or more in thickness, and so soft and friable, that one winter's exposure is sufficient to pulverize nearly all of it, so that I apply it without burning; deeming it of more benefit than if it were burnt. I haul the layers between the stone also, from which I receive equal benefit; the composition being very near the same. I have hauled on extensively, since the first experiment of 1837. From various trials, the increase of the crops pays all expenses the first year, as two hands with a team can dig the lime and cover an acre a day—about 15 loads per acre.

Some of my neighbours quarry and burn the limestone, throwing the soft pulverulent lime-earth, chalk, or calcareous marl, back in heaps, and there leave it, as if of no value—as at Job Ridgway's farm, as mentioned above, in Rogers' report; in the extract from which, I have corrected some slight errors as to names and localities.

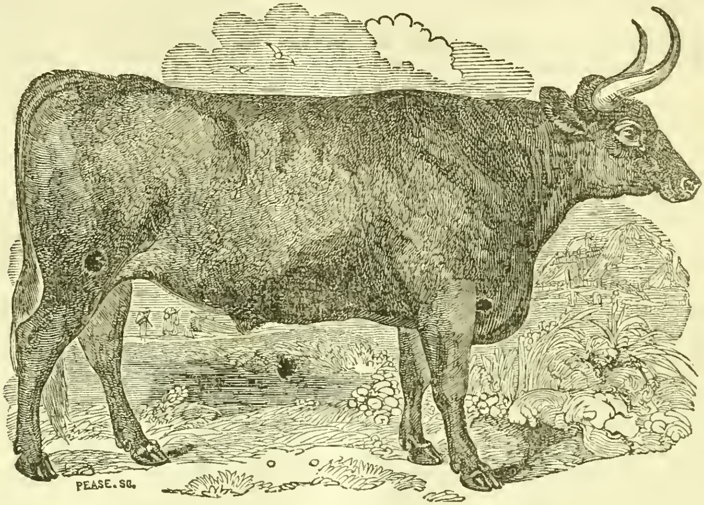
I could say much more, but fearing I should be too tedious, I conclude. Please dispose of this as you may think proper.

D. Petit.

Mannington, Third month, 1843.

Grafting.—M. Schroer recommends using a branch of common willow, an inch or two in diameter, in the following manner, as a matrix for receiving the grafts of such varieties of apple, pear or quince trees, as it is desirable to multiply. Make longitudinal cuts or slits *through* the branch, at equal distances of 15 or 18 inches. Take grafts, having two perfect buds, give the lower end the usual wedge-shape, using a keen knife, and insert them in the slits of the willow, making the lower bud sit close to the slit. Then bury the branch in a trench formed in good garden soil, of such depth as will permit the upper buds to protrude just above the surface of the ground, when the trench is again filled. The ground must be watered occasionally, if the season be dry, and weeds must be carefully extirpated whenever they appear. In the spring of the following year, the branch may be taken up and cut in pieces, leaving a small portion to each of the growing grafts—which are to be replanted in a nursery. The willow does not form a permanent union with the grafts, but merely supplies nutriment till the proper fibrous roots are produced from the lower bud.

Onions.—If onions be planted in the same hill with vines, it is said they will protect the latter from the depredations of the striped bug.



THE SUSSEX OX.

The resemblance between the Sussex and the Devon oxen is great; they betray the same origin, and it is thought that formerly there were two distinct breeds, one large and coarse, somewhat resembling the Hereford, the lighter race bearing about them marks of the Devon. Mr. Ellman speaks of the Sussex ox, as having a small and well-formed head; and this is true, when compared with many other breeds, or even with the Hereford; but it is coarser than that of the pure Devon; the horns also pushing more forward, and then turning upwards, thin, tapering and long, yet not so as to confound them with the Long-horns. The eye is full, large and mild; the throat clean, and the neck, when compared with either the Long or Short-horns, long and thin; yet evidently coarser than that of the thorough-bred Devon. But the shoulder is the main point of difference; and here is the principal defect in the Sussex ox: there is more width and roundness on the withers; it is a straighter line from the summit of the withers towards the back; there is no projecting point of the shoulder when the animal is viewed from behind, but the whole of the fore-quarter is thickly covered with flesh; giving too much weight to the coarser and less profitable parts. This is unquestionably a defect, but it is counterbalanced by many admirable points; for if there is more weight in front, the fore-legs are wider apart, straighter, and more perpendicular than in the Devon, and they are placed more under the body, rather than seeming to be attached to the sides: the fore-arm is large and muscular, but the legs, although coarser than those of the Devon, are small and fine downwards, and particularly below the fetlock. The barrel is round and deep, the back straight; no rising spinal processes are to be seen, but rather a central depression; and the line of the back, if at all broken, is only done so, by a lump of fat rising between the hips. The belly and flank are capacious, with room before, for the heart and lungs to prepare and circulate the blood, and space behind, in the capacious belly, for the full developement of all the organs of digestion; yet the animal is well ribbed home; the space between the last rib and the hip-bone, is often very small, and there is no hanging heaviness of the belly or flank: the loins are wide, the hip-bone does not rise high, nor is it ragged externally, but large and well spread, and the space between the hips is well filled up. The tail fine and thin, is set on lower than in the Devon, yet the rump is nearly as straight, for the deficiency is supplied by a mass of flesh and fat, swelling above. The hind-quarters are clean, and if the thighs appear straight without, there is plenty of fulness within. The Sussex ox holds an intermediate place between the Hereford and Devon in another point of view, seeing that he has all the strength of the first, with the activity of the second; and the propensity to fatten, and the beautiful fine-grained flesh of both; while experience has shown, that he possesses as many of the good qualities of both, as can be combined in one frame. He is of a deep chesnut-red colour; some however, preferring a blood bay; while a deviation from these, indicates a stain in the blood.

For the Farmers' Cabinet.

The "Small Farm" principle, upon a large scale.

Messrs. Editors,—Much has been said of late on the superior advantages of small farms; the sequel of which is, *don't cultivate more land than you can cultivate well.* The force of this, no one will pretend to gainsay; although the size of farms worked upon this principle, may vary very much in extent; depending upon the force employed, the mode of cultivation, and the *lay* and quality of the land. But however correct the principle, and conclusive the arguments in its favour, there are objections and difficulties, which in many instances must be, for a time at least, insurmountable.

It frequently happens that upon large farms, the situation of the buildings is such as to render a division difficult and inconvenient; sometimes the desire to retain entire the patrimony of our fathers, is an equal impediment; or we may have added to our acres, with a view of dividing them among a rising generation.

Now I propose suggesting a plan for the management of large farms in this section of country, which appears to me to embrace the advantages of the small farm system, without conflicting with any of the impediments in the way of its adoption. And though I may not add much that is new, I may produce a system from abstract propositions, which will possess increased advantages from being combined.

1st. *Arrangement.*—Set apart for tillage upon that portion of the farm best adapted to that purpose, seven fields from 10 to 15 acres, according to the force to be employed; keeping constantly in view the principle upon which the system is founded, *not to cultivate more than you can do well;* the *balance* of the farm to be kept in grass for grazing, which too, should be that part of it best provided with water, shade, &c., and which should be well laid down with such grasses as experience has shown to be adapted to the soil.

2nd. *Rotation of crops.*—First year corn, second, oats, spring-wheat, or barley, as circumstances may best suit, and clover seed, a liberal allowance; 3rd. Mow first crop, having as early as possible in the spring, put on all the barn-yard, or long manure, especial care having been taken to distribute it equally over the land, so that every part may at once receive its benefit, and that it may the sooner be covered by the clover, and thereby protected from the sun. Plough down the after-growth, with or without a light pasturing, as the quality of the land may justify, for wheat, which may be put in with a common harrow or cultivator, the latter of which I prefer, as it covers the seed better, and leaves the surface more uneven, to moulder down by the frost of winter and the roller in the spring, about the roots of the young plants. Sow grass seed in the fall or spring, or both, as experience shall prove best, for without observation and judgment, no theory can be successfully reduced to practice. 5th and 6th. Mow first crops, and pasture the after-growth. 7th and last; Pasture with cows, horses, &c., the standing stock of the farm; which should, upon no account, be allowed to run with the fatting cattle.

3rd. *Manure.*—As this is the main spring, the very Philosopher's stone of the art, too much attention cannot be bestowed upon its preparation, preservation and use. In the first place, let the cattle yard, sheep and hog pens, be well covered with earth to a depth proportioned to the amount of manure likely to accumulate upon it, which may be gathered from headlands, fence rows, or such other places as may afford a ready supply; and if a *basin* be formed below the barn yard, for the reception of the liquor which may escape from it, and a good deposit of earth be annually supplied, with such weeds and trash as may be collected, a large increase of good manure may be obtained. The hogs too, should be kept confined through the winter and spring, and if furnished with the "raw material," will manufacture a large amount of excellent manure.

It has been ascertained by chemical experiments, that gypsum applied to fermenting manures, combines with the gases that would otherwise escape, and renders them fixed, or involatile. With this view, and to facilitate the decomposition of the long manure, when it shall be applied to the land, I propose mixing with the earth in the bottom of the yards, and with the long manure, by scattering a portion of it over the yards at intervals through the winter, a sufficiency of gypsum to produce that result; the amount can be best ascertained by experience. Perhaps a ton to fifty cords, or an hundred common cart loads would be sufficient. If there should still be an escape of fœtid gas, the quantity could be increased.

I have said that the long manure should all be applied to the clover. This would be returning to the soil all its produce, except the grain, which shall be sold; and with an application of gypsum and ashes to the corn, (*if it should require it,*) with the proposed rotation of crops, alternating dry with green, and ploughing down a crop of clover for wheat, would certainly increase the production, and improve the quality of the plough land; while the dirt from the yards, &c., would afford an excellent top-dressing for such parts of the pasture land as should most require it; the whole of which should be *scratched* with a heavy brush as early as possible in the spring, which would pulverize the manure dropped by the cattle, and freshen the pasture by scarifying the surface. Should, however, portions of the pasture land at any time require renewing, it could be readily done by sowing with wheat and grass seed, after a single ploughing.

I have said nothing about lime as a manure, but confined myself to the natural resources of every farm, with the exception of gypsum. As the use of lime requires a heavy draft upon the produce and labour of a farm, common prudence seems to require, that it should only be resorted to where its application is of *known advantage;* and then in such quantities only as are absolutely necessary, instead of the loose manner in which it is too frequently used. The only inquiry being, how much may be applied without destroying vegetation—or as the phrase is, "*without killing the land.*" *That* lime which can be used in the largest quantities *with impunity*, being the most sought after and esteemed. The precise amount necessary for the different soils, can only be ascertained by careful experiment and close observation. My own impression is, that large quantities of lime, to say the least, are thrown away with the consequent expenditure of money and labour—and my experience here, thus far, fully confirms that impression.

And now for the advantages: 1st. It enables the farmer to accommodate his labour to the force at his command; cultivating only such parts of his farm as possess the greatest advantages for tillage, while the hilly, broken or rocky land, if there be any, is set apart for grazing. It saves fence, as all experience goes to prove, that cattle thrive best, when allowed the whole range of their pastures. It saves manure by applying it in the spring, instead of allowing it to bleach and waste in the yard until fall, with a whole season's loss of its benefits. It secures a probability, if not a certainty of a better crop of wheat, than if the manure had been applied in the fall in an unfermented state, thereby producing a superabundance of straw and greater liability to rust. And it offers a saving of labour in the smaller amount of land tilled, which will afford more time and attention for the collection and preparation of manure, with many other advantages which will suggest themselves to the practical farmer.

A. R. M'Ilvain.

Chester co., Pa., March 1st, 1843.

From the Cultivator.

A Profitable Cow.

Messrs. Editors.—I send you some statements of the production of my cow, for publication, hoping it may induce some to reform in the treatment of animals so useful and profitable. We made last spring in one month, from one cow, 59 pounds of butter; commencing the 5th day of May, and ending the 4th of June. Within that time we weighed her milk for three successive days—the whole weight one hundred and eighty-nine pounds, averaging sixty-three pounds per day. Some five or six years ago, in the month of April, we made in twenty-one days, thirty-nine pounds and six ounces, besides using milk freely for the family. We also made on another trial of nine months, two hundred and seventy-two pounds, besides using milk for a family of six persons. The cow was 10 years old last spring, had a calf at two years old, and has had one every year since; is of the native breed, large size, always in good condition, and has been well kept from a calf, to which cause I attribute a portion of her superior qualities and extra size; though there must be something "bred in the bone," that gives us yellow butter at all seasons of the year, and milk always, nearly, and often quite the whole year. While on her trial last spring, she was fed six quarts of buckwheat bran per day, with what hay she would eat, till grass took the place of hay.

Would not all farmers do well to keep fewer cows, and keep them better? Is not one well cared for, more productive than one poorly fed and attended? Is not a warm stable better than the leeside of a rail fence? Is not a good bed of clean straw better than one of manure, or can they be as comfortable with thirty or forty pounds of it adhering to their thighs, as if they were kept smooth and clean as in summer? In short, does not any thing that adds to their comfort, add to their productiveness?

Such treatment may be objected to on account of expense, but has the objector counted the cost? Do turnips cost more than hay? Does bran, or oats, or corn even? I think not at this time. I see nothing extra, but a trifle of labour and care, and does not the superior condition of the animal pay for that more than four-fold?

Daniel J. Curtis.

Canaan Centre, Jan. 18th, 1843.

For the Farmers' Cabinet.

The Tare, or Vetch Culture.

It is very desirable that we should cast about, and see if there be not other crops, besides those that are grown *by every one*, that might be raised, either as food for stock or for manufacturing purposes. With this view I would advocate the cultivation of the tare or vetch, of which we hear surprising accounts, and which could be raised in this country to the greatest perfection, if the times and seasons, and situations were to be watched as carefully as they are elsewhere. I was shown, the last spring, a sample of tare-seed which had been brought to this country by an English emigrant, for the purpose of cultivation; and was soon after informed by a seed merchant, that they had been sown with a prospect of success; and was given the promise of a faithful report at the end of the summer, for publication in the Cabinet—but this I have not received, *nor did I expect it;* for the person who brought the seed from England, although professing to know all about it, made the fatal mistake, of selecting the *winter*, for the *spring* variety; an error which would not bear reporting. The seed of the winter tare, is much blacker and rounder than that of the spring variety; and if sown in the spring, will not produce half a crop; while the spring tare, if sown in the autumn, will not stand the winter—a consideration of the greatest importance; but, as we have seen, apt to be overlooked, even by Englishmen themselves. Then again, the land should be suitable to their growth; rather moist, and enriched with manure; the season of sowing also must be propitious; and then, if every thing *hits*, the crop will be astonishingly productive and profitable; leaving the land in a most perfect state of culture for a full and heavy crop of turnips, ruta-baga, sugar-beet, or mangel wurzel; after having given far more green food than the best meadows afford, suitable for the feed of every kind of cattle, horses, sheep and hogs; and in the finest condition for grain of any kind the following spring, after two green crops.

An English writer says, "Between the 29th of August and the 4th of September, I ploughed and sowed, with the winter vetch or tare, 18 acres of barley stubble. The whole summer having been exceedingly dry, the land ploughed as dry as ashes, and appeared to have not moisture sufficient to bring up the seed; I chose, however, to sow it in this state, because I was apprehensive that if rain came before sowing, the ground might fall so flat that I should not bury the seed with the harrows. After sowing the seed, I trod the land with sheep; and notwithstanding the great drought, by the 19th of September the tares had come up thick and strong; the sowing in this manner succeeded to admiration, for as they came up at first exceedingly strong, so they held their own all winter, and proved the thickest crop I ever grew; yielding me about 12 tons of green food per acre, which could have been converted into three tons of superlative hay. My success I attributed, in a great measure, to early sowing on a dry and pulverized tilth; for the next year I was not able to sow my winter tares until the 18th of October; the season being wet, and the land ploughing and harrowing heavily, but not more so than we generally desire for wheat; nor did the land tread while harrowing: yet, although the winter proved very mild until the beginning of February, when there came a little frost, the vetches never throve, but looked dwindling and of a rusty colour, which I attributed to late sowing on a cold and wet tilth; and yet the soil was not naturally stiff or heavy, but a mixed loam and friable. About the middle of February, there fell a hard frost with an easterly wind, which destroyed the whole crop, root and branch. So much for late sowing on a wet and cold tilth."

I copy the following account from an English work, as a conclusion to the above, as few of our friends have ever had the opportunity of seeing the growth of the tare, or witnessed the exceedingly productive crop of green food that might be raised by careful management.

"The tare is a pulse of the pea kind; its vegetative powers are superior both to the pea and the bean, being productive, even on lands too poor for them. This plant may be considered as a link between grain crops and the artificial grasses, since it may be grown and applied to either purpose, most congenial to the wants of the agriculturist, or the nature of the soil; in consequence of this quality of the tare, and its strong vegetative powers, it ranks amongst the most valuable plants that can be grown; it may be profitably raised on poor gravelly, or clayey soils, or fresh broken up lays, as well as on lands of the most fertile quality; with the certainty of a fair produce on the former, and without the least fear from excessive fertility on the latter, except when required for seed. The tare grows in length, from three to six feet, producing blossoms and pods, somewhat after the manner of the pea, but on a smaller haulm, and therefore more recumbent. It will follow after any crop for green food, lightening the land considerably, and enriching it by its strong and overshadowing growth. The seed is sown broadcast, at the rate of two, or two and a half bushels per acre, and the produce is about 12 tons of green food per acre; or from 20 to 30 bushels of seed, on good soils. It might be followed by every crop that is cultivated, either grain or grasses, according to the nature of the soil, light, moderate, or stiff; affording also a first-rate seed bed for potatoes; the autumnal sowing of tares coming off the ground in good time for a full planting of these, the latter end of May; as also for turnips, beets, or ruta-bagas. In fine, it is perhaps the most valuable of all the crops in the rotation of the best farmers in England, drawing less from the soil and yielding more food for all descriptions of stock, than any other whatever."

John Taney.

January 12th, 1843.

Stock Raising.

Editors of the Cabinet,—I was much interested by an article in your last number, over the signature of "Zebu," by which, in the course of a wide ramble among the breeds of British cattle, he seems inclined to show us of the barn-yard and dairy-house, that the best plan is for us to take his advice and be of his opinion, in regard to every thing connected with the subject of stock raising. Now I admit that every one has a right to his opinion, and is at liberty to convert others who differ from him if he can; but *fair and softly*—and what are Zebu's opinions, and how will they suit general application? In the first place, he eulogizes the Short-horns, whose portraits adorn your pages, and yet seems to demand an oblivion of their existence, by recommending us to raise the best animals that can be obtained *anywhere*. He well enough remarks, that one breed of cattle can never fulfil all purposes required, yet seems to waver about sundry varieties suited to the dairy—now this I do not comprehend; does he wish to say that all are good for that purpose—that it is immaterial of what breed a cow is, provided she be good for the pail? if so, I think he is in error, and that by his own showing. He asserts that the practice of his friend Johnson, buying up his own-bred heifers, is the best plan for an economical rearing of dairy cows; but does he not perceive, that the cause of these heifers becoming good cows, is *that* for which his friend keeps an eye upon them from their birth—namely, because of their having come of animals whose character he knows to be suitable to his purpose? Standing to him precisely in the same relation, in which the Short-horns, the Devons, or the Sussex Polls do to their breeders. I believe that cattle as much depend on their progenitors for their good qualities as for their existence, and yet your correspondent holds up the idea, that the stock which he has been eulogizing, is of no particular value to dairy farmers, but that each should hunt up for himself the best cows he can find, without regard to name or breed, and raise his own stock from them. Now, had such been the practice in England, the very breeds which he praises for this or that peculiarity, would never have existed. As to the general adoption of his friend Johnson's plan, he must be aware that it would defeat its own object, for every one who had taken the trouble to raise a heifer from *his* stock, would feel inclined to raise the price also, when he found it to be an object with the breeder to purchase her back again, if he did not prefer to keep her for the use of his own dairy. And further, Johnson asserts that a part of the heifers raised from his own cows, will be found to be valueless for the purpose of the dairy. Now we know that much depends on the mode of rearing and treating young stock, and that by mismanagement, many a good milker has been spoiled in the calf: yet I must remain unconvinced, that it is best not to raise your own calves from first-rate cows. Besides, if the *points* of a cow are indications of her qualities, these will be developed, so as to enable an experienced eye to judge of her future character, long before she becomes a springer. Why, I have seen calves only a few weeks old, that any one who knows anything of the matter, would pronounce milkers; and in this case, who would like to dispose of them with the bare chance of repurchasing them when fine young cows? However, one thing is pretty clear; those who choose to raise good stock for themselves, will still continue to do so, whether it be short-horns or long-horns, and if they seek their own interest, they will keep the breed pure from base intermixture. That a judicious cross from some other pure breed may then prove advantageous, is highly probable, but great care is requisite in seeing that the new breed is adapted to the same purpose. I believe our native breeds of cows are equal, for dairy purposes, on an average, to most of the imported races; they want, however, the capability of feeding well, and in the case of oxen, of the powers of labour. That breed which is the best for dairy purposes, amongst the imported stock, is the most proper for crossing with our native cattle; the great object being, the improvement of their already existing good qualities. I would, therefore, hesitate to advocate the introduction of any new characteristic which should have a tendency to detract from the old ones, and would leave to other breeds, the possession of their peculiar properties; remembering, what Zebu observes with truth, that each is suited to a particular purpose.

A Montgomery Farmer.

For the Farmers' Cabinet.

Lime--The Golden Plough relinquished.

Messrs. Editors,—My Lancaster friend seems to think my article, if designed only for the "common reader," might do well enough. Now as a large portion of the readers of the Cabinet are common farmers like myself, without much science, I must "confess the soft impeachment," and acknowledge that it is principally for the benefit of the common farmer, I am writing. Every class of readers ought to have articles to suit them, and I have no doubt Lancaster County Farmer's Chemical Analysis, and quotations from James F. W. Johnston, M. A., F. R. S., &c., &c., will satisfy the most scientific.

Perhaps I went too far in supposing magnesian lime was not used in England; if so, I must lay part of the blame on the Cabinet and Cultivator; the impression I received from perusing their pages was, that magnesian lime was not much used, or approved in that country. But this might be explained if we were informed how much magnesia, was required to constitute magnesian lime. That it must be very different from ours, is proved by the large quantity applied to the acre. His own statement, that "300 bushels is the *average* quantity," is like the gun in Hudibras,

Which, when aimed at duck or plover,
Recoiled, and knocked the owner over.

For it will convince practical farmers, that it must have been nearly pure carbonate.

He also says, Sir H. Davy proved an acre of clover to contain four bushels of lime and plaster, or carbonate and sulphate of lime; (magnesia is not mentioned,) and adds, "phosphate of lime, or burnt or crushed bones, is also a powerful fertilizing agent, the base of which is of course lime." The base of a statue may be stone, and its head gold. I have always understood that bones, when boiled until nothing but the base was left, were of but little value. If this is not the fact, Sir H. Davy's countrymen are very foolish to come to this country for bones, when they have any quantity of limestone
at home. I am an advocate for plaster,
well as animal manures, bone-dust includ
and have never said a word against lime
small quantities, if the soil did not cont
it naturally; but I repeat again, that none
his analyses from Sir H. Davy, or any ot
great man, proves that more lime is requi
than plaster. And if the professor had se
rated the carbonate from the sulphate,
would have shown that it required m
plaster. Yoking them together, may
ceive the *scientific*, but I should not like
try it with my "common readers."

But now for the cream of the article—
Lancaster friend tells the world, that "ma
soils are unfriendly to the action of mine
agency." In sooth, here is a dark spot
the lucid ray of science to expand in. I
not wonder Lancaster County Farmer l
such great stress on chemical analy
what money, time and labour, might h
been saved! What sore backs and tea
eyes prevented, if we had known this soon
I have often heard that extremes meet,
I little thought, when Lancaster Cou
Farmer and I parted in such opposite di
tions, that we should not only meet, but t
I should actually be past by him. I suppo
most soils contained such minerals as li
and plaster, and if they were deficient, t
a small quantity might be added; that
quantity must be small, I thought was pro
by the fact, that some soils, such as
Townsend's, have enough lime naturally
last 100 years, and every "common farm
knows, that a few bushels of plaster will
completely supply what is deficient in
soil, that subsequent applications will m
no change whatever. But I never he
before, that "many soils are unfriendly
the action of mineral agency." Ah!
Lewis that was the "unkindest cut of a
you may well exclaim, "Save me from
friends." Why, this is not only "kick
the sheep," but destroying the wool tr
Farewell plough! I have no further cl
to you. This is worth more, coming fro
scientific man, than all I have ever said
the subject. We had better give the St
geologist eight dollars per day, and milea
to analyze our soils, and point out th
"unfriendly to mineral agency," than to
thus giving medicine in the dark, with
knowing whether we are killing or curi
Never let it be said again, "this controve
is convincing no one;" I even think
change has come o'er" our Lancaster Cou
Farmer's dream, since he wrote his first
ticle; he there led us to infer, that 70 ac
by the use of magnesian lime, was mad
produce more than 200 of the same l
without it. Never hinting that stable

nure, plaster, and more than all, the better cultivation which smalls farms generally receive, had any thing to do with it. He now admits they might account for it, "without a particle of lime;" and also says he "can point to any number of farms as productive as Townsend's, which are naturally rich in carbonate of lime:" he should have added magnesia, "and if not," by feeding fat horses and cattle, and plenty of clover growing, the very essence of fertility would be furnished.

If he can point to any number of farms as good as Townsend's, they are at least equal to the same number of his "best limed farms." And "common" farmers, without science, cannot see what all this about rich stable manure means, unless Lancaster County Farmer is willing to admit, that less vegetable and animal manure is made on the "best limed farms," than on such as Mr. Townsend's. None of them buy manure, for there is none to be sold.

His assertion, that "barren tracts" are renovated by lime, and indirectly by clover, will not bear the test of experiment. Clover is the direct thing, and plaster the best manure for it. One of the most successful experiments given in agricultural works, was made on a poor gravelly soil, with clover and plaster alone. Our friend concludes, with the experience of an old man who made manure enough on a small farm, to keep it in a high state of fertility without lime, but in an evil hour purchased land adjoining, which with all the cultivation he could give, would produce no green thing, for if it did, it must have increased his manure. As it appears to have been originally the same kind of soil, I cannot imagine why the same treatment would not produce the same effects, unless some former owner had applied 300 bushels of magnesian lime to the acre; if that was the case, some believer in the homopathic doctrine, that poison will counteract poison, must have advised the second dose. But jesting aside—any "common reader" of the Cabinet, could have explained the mystery, by directing the old man's attention to the numerous instructive articles to be found in your paper, on small farms.

In order to "*define my position*" with regard to plaster and carbonate of lime, I will give one more experiment. When plaster was first introduced into this State, Mr. Daniel Buckley, an enterprising farmer of Lancaster county, procured a few tons and spread it with the shovel, at the rate of 25 or 30 bushels to the acre, and was delighted with the effect produced. But when on better information, he applied one bushel per acre, to the same kind of soil, the effect was the same.

I think, according to Lancaster County Farmer's own showing, the only prop he now has to support him in his *enviable position*, is the supposition that Mr. Townsend's soil, and the *any quantity* as good, which he can point out, is rich in carbonate of lime; if this fails him, as I am well assured it will, if the test of the chemist is applied to it, down—I was going to add something more, but I forbear.

A thought just strikes me, that Lancaster County Farmer may be one of my best friends, and knowing I was deficient in science, sent his last article on purpose to give me something easy to refute. I dislike striking at a mask; a man might innocently knock down his next neighbour. In concluding I will remark, that Lancaster County Farmer seems to consider me an enemy to lime, because I do not recommend more than 50 bushels for 50 years; and a friend to plaster, when I have never advised more than one bushel in three years, which is not quite 17 bushels in 50 years.

I have written Lancaster County Farmer so often, that it has given me a distaste to long signatures, and as the plough dream is over, I think a shorter one may answer for myself. J. W. Van Leer.

Chester co., Pa.

The Bee.—Providence, that delights in spreading beneficence as well as beauty over all creation, has wisely formed the bee as an humble but active and untiring agent, in gathering up for the most important purposes, and converting to the most valuable use, the scraps and fragments of nature, which would otherwise be scattered by the "viewless winds," and spread through the "ambient air." She has adorned the song of the poet, pointed the tale of the moralist, and furnished food for the hungry in the desert. Plutarch pronounced the bee a magazine of virtues; Quintillian asserts that she is the greatest of geometricians; and Watts, by calling in poetry to the aid of morality, has rendered her figure the means of interest, improvement and delight, to many a youthful mind. Philosophy has stooped to examine her habits and to watch over her haunts; she has presented the models of science, and called forth the attention of scientific men; by her the husbandman has been cheered, when sitting in his cottage garden, in his evening reflections on his day of toil; and in whatever light she may be viewed, there is none who can declare that he has no interest in her ways.

Poudrette as a Manure.

The following communication, with the accompanying letters, extracted from the pamphlet alluded to below, and written by persons who have used the poudrette, came to hand too late for our last number. Since that time, it will be perceived from a notice on the last page, that the proprietor of the Cabinet has made arrangements with D. K. Minor, for the sale of the article in Philadelphia. It is coming extensively into use, around New York, where it is manufactured; and from the frequent inquiries made of us in relation to it, we have no doubt farmers here are desirous to test its value. On corn, grass, potatoes, turnips, cucumbers, melons, &c., &c., it has been found to act very beneficially. We expect to have a supply constantly on hand. J. T.

Editors of the Cabinet,—Gentlemen, I send you herewith a small pamphlet containing several statements made by practical farmers, in relation to the use of *poudrette* as a manure, and shall be much obliged to you if you will publish such extracts from it as you may deem of interest to your readers. Many inquiries have been made in relation to this valuable manure, but its recent introduction into use in this country, and the limited number, comparatively, who have used it, have prevented its becoming generally known and appreciated, as it deserves. The statements which you will find in the accompanying pamphlet, were made by gentlemen of intelligence and experience, who have used the article in considerable quantities for several years, on various crops and soils; and who may therefore be supposed to understand its value. I am fully satisfied that the time is not distant, when it will be used by all who can obtain it—and that you will benefit the cause of agriculture, by bringing the subject before your readers.

Respectfully yours,
D. K. Minor,
No. 118 Nassau st., New York.
March 10th, 1843.

Mr. Edward Condict, of Morristown, New Jersey, under date July 25th, 1842, says:—

Sir,—In reply to your circular of the 20th inst., asking information relative to the effects of poudrette on crops during the years 1841 and 1842, I would state, that in the year 1841, I planted a field of corn, on about one-third part of which, I used the poudrette, putting a small handful, say somewhat less than a gill in each hill. The other part of the field I manured with good barn-yard manure, a shovel full in each hill; the corn was planted about the 10th of May, and by the 20th of June, when the corn was dressed out the second time, that part where the poudrette was used, was more than as large again as the corn on the other part of the field; it also ripened a week or ten days earlier than the other; there was no perceptible difference in the yield. I also used it with good effect on buckwheat, potatoes and turnips, particularly the latter. In order to ascertain its effect on turnips, I sowed a strip in the middle of the piece, mixing the turnip seed and poudrette together, and sowing it broadcast, the effect was very perceptible, the turnips were larger and fairer, and were not disturbed by grasshoppers or any other insect. The soil on which the above mentioned crops grew, was light and somewhat inclined to sand, or gravel.

Early in October last, I used the poudrette on a loamy soil, somewhat inclining to clay, which I had prepared for wheat; there was no difference in the soil nor in its preparation, except that on about one-fourth part of it, after the wheat was sown, about 20 bushels of the poudrette to the acre, were also sown, broadcast; and the result is, that on harvesting that part where the poudrette was put, is much the heaviest grain, and but very little injured with the rust or mildew, while the *other* part of the field is considerably injured.

I am so well pleased with the poudrette, that I shall for the future discontinue the practice of using barn-yard manure in the hill. Yours, &c.,

Edward Condict.

Mr. Fullager, an experienced gardener in the employ of S. W. Anderson, Esq., at Devoes Point, speaks of its astonishing effects on water-melons as follows:

Devoes Point, Aug. 1st, 1842.

To D. K. Minor,—Sir: agreeably to your request in your circular, I have the pleasure of stating, that I have used the poudrette manufactured by your company, and have seen its good effects upon flowers and hot-house plants, but I noticed it *more* particularly when used for *melons*.

I planted water-melons in rather poor and gravelly soil, in 1841, by digging holes 18 inches wide, and put one quart of poudrette, mixed well with earth, in each hill, when the plants came up, I added one pint more of the poudrette to each hill, spreading it about three feet, and hoeing it well in. The effect was, that the vines grew vigorously, and in the small patch of three square rods of ground, I gathered 63 melons, weighing from 30 to 40 pounds each.

I gave some of the same seed to a neighbour of mine, who had planted it by mixing one shovel full of good yard manure to each hill,—the soil was the same as mine, and the largest melon produced in the patch, did not weigh over 18 pounds. When he discovered the difference, he at once made up his mind to subscribe for a share of your stock, which he has done, and is well pleased with his bargain. E. Fullagar.

The following letter is from Mr. Joseph Tyrrell, of Trenton, New Jersey, dated 9th of August, 1842, he says:

"I have used poudrette on my farm near this place, the last and present year: and am quite satisfied in regard to its virtues as a manure. My soil is a sandy loam. Last year I applied it to corn on rye stubble, ploughed under the previous fall, say a small handfull to each hill, at the time of planting, and in immediate contact with the seed. But I had not as much as was necessary for the whole piece. After the corn came up, and during its growth, the difference in the appearance of the part to which poudrette had been applied, and that which had none, was very great; the former was luxuriant in its growth, the colour a rich dark green, while the latter was rather sickly in appearance, and the plants less vigorous. The effect produced on the corn by the application of poudrette, was noticed by several of my neighbours who came to look at it. Being unfortunately sick at the time of cutting up and husking the corn, I was prevented from noticing the returns particularly, but I am satisfied that they were increased by the application of the poudrette, no other manure being applied to any part of the land. I have applied it to corn this year under similar circumstances, and so far as I can see at present, with most favourable results. I have also used it in ny garden with great success. In March last, I planted six rows of early peas, four of the rows were manured with poudrette, sprinkled liberally over the seed. These came up five or six days before the others, hey grew more luxuriant, came in blossom 10 days sooner, and yielded much more abundantly than those which had no poudrette. I have tested its merits as a manure for cucumbers and melons, and prefer it to any other for those articles. Early in the spring of the present year, I applied ome to a strawberry bed, planted out in September last. I sprinkled it pretty freely on the bed, and worked it in with the prongs of a small hoe. Its effects were visible after he first shower of rain. The plants grew steadily and rapidly, and produced large and clean fruit."

Agricultural Anecdote.—A knowledge of the habits of animals is sometimes of great service, even in the saving of cities. James, in his recent history of the Black Prince, gives an amusing instance of this in the defence of Rennes, a town of Britanny, besieged by the Duke of Lancaster. In order to effect the surrender of the place, the Duke enforced a strict blockade, which soon reduced the garrison to great straits; but he knew they would hold out to the last extremity, and determined to try a trick of war. For this purpose, he drew off his soldiers, as if he had left the place, and formed an ambuscade in some bushes behind the town. He then caused a number of hogs to be turned loose in the plain, in the hope that the starving garrison would rush out for the prize. But they understood his trick, and turned it to their own advantage. They opened one of the sally-ports, and hung up a young sow by the hind legs to the lintel. She of course made a great outcry, and the hogs came rushing up to the place from whence the noise proceeded; she was then cut down and driven through one of the streets, and forced to keep up her music. The soldiers sprang up from their ambuscade, in order to try and if possible prevent this unlooked-for termination of their experiment; but James says, the hogs, with that intuitive perception of the way their masters do not wish them to go, which has ever marked their nature, went rushing tumultuously into the town, and afforded the garrison very seasonable relief.

Bone Dust, May be applied broadcast, as gypsum is sown; or placed in drills with the seeds, and this is, doubtless, the best way of using it. In this way, its influence is felt at once in the germination and quick growth of the plants, a thing of much consequence with the turnip and other plants, liable to be destroyed when young, by insects. In England, it is always, or generally, sown in drills with turnips; and in quantities varying from 10 to 30 bushels of dust per acre. It has been recommended to ferment the bone dust before sowing; and Mr. Colman, in his Report, says: "the most successful application of bone manure which I have known, was where they were mixed at the rate of about one part to eight, with leached ashes, or mould, and a fermentation brought on, before they were applied. They were then spread lightly in the furrow, where carrots were sown. The effects were most favourable, and surpassed a free dressing of barn manure, to the same kind of crop." Mr. C. does not name the quantity used per acre.—*Cultivator.*

For the Farmers' Cabinet.

The Silk Business.

Messrs. Editors,—I rejoice—no one more rejoices, at the information conveyed to me from all quarters of the Union, that the Rev. Henry Colman has undertaken an agricultural tour of observation in Europe. His reports from thence, will be looked for with more than common interest, and great good will, no doubt, be the result. I know of no one in whom the power of judicious observation is more inherent, and to whom the agricultural community could look with more confidence.

It is said, Mr. Colman intends to devote himself to the inquiry, how far it would be expedient to introduce the silk manufacture into the United States. In the south of France, he will have an opportunity of studying the subject in all its bearings—which, I must be permitted to remind him, are various and even conflicting; in my estimation, the profit of the employment consists not in dollars and cents, nor the facility and ease with which it might be carried on. It is true, that it might be there a fit business for "old people and children;" but in a nation like ours, we ought to be able to support our "old people and children" in a far different manner than they are provided for in the silk countries of Europe; and *that*—or I am much mistaken,—Mr. Colman will perceive with a glance. And let him observe, whether it be a fact, that the inhabitants of these countries are "imbecile in mind and body, short-lived, and cadaverous in appearance, *liable to natural malformations*, particularly of the hands and feet; and fit subjects of tyrannical and monarchical governments," as they have been represented to be. For myself, I do not hesitate to say, I prefer to see a man walk upright in the majesty of his nature, improving the soil of his country and his own mind, than to contemplate him confined to a space about four feet square, packed close in a manufactory, imbibing an atmosphere contaminated with floating and putrid animal effluvium, for 16 hours a day. But even this is better than to see this system inflicted on "old persons and children"—that appears to me about the perfection of cruelty, of which I do not like even to think. But Mr. Colman may have it in his power to remove all these difficulties, by showing us that the system *is* adapted to a country, boasting of hundreds of millions of acres of land, all crying out for improvement; thousands of miles of paths to be made straight through the wilderness, and the rough places made plain; with millions of intellectual beings to be reared and cultivated in the strength of body and mind to undertake the glorious work—the renovation of about one half a world!

And I must be excused if I say, I doubt whether the silk business is to be carried on with that careless "odd times" service, which has been made its greatest recommendation: or that tending the worms and reeling the silk, is by any means so pleasing a task to the "female portion of our households," as has been represented. Judging from what I lately witnessed at a cocoonery at Cantwell's-bridge, Delaware, I should say, decidedly, it is quite the reverse; for here I saw two lovely girls sitting to the loathsome task of stirring cocoons in hot water and catching the ends of the silk for reeling in an atmosphere so putrid and disgusting that I would not confine a brute to it!—and heard them complain, that after a long day's labour they seemed to have done nothing. These girls ought to be differently employed; in the beautiful "far West," their services would be a thousand times more valuable, in making happy homes for a very different *race of beings;* where the delicate lily would be exchanged for the rose of nature's painting, and no more be heard of sick headache and difficulty of breathing!

But my intention was, to introduce to your notice, the following extract from a late Address before the Agricultural Society of Fredericksburg, by J. M. Garnett, Esq., who has taken up the subject in his own lucid manner, and in my opinion, has made an end of it. He says:

"My last experiment I feel scruples in mentioning, lest I should excite in my hearers the same very annoying reminiscences which the word *multicaulis*, never fails to awaken in my own mind; but the statement of unsuccessful trials, is often as useful to us as of those which best succeed, and this fact encourages me to proceed. Know then, that having been amongst the afflicted with the multicaulis humbug, I sought to alleviate my sufferings by striving to make some use of those far-famed and treasure-bearing bushes, which, when the golden harvest time came that was to fill all our coffers to overflowing, I could neither sell nor give away. The periodicals that had been the chief spreaders of the epidemic, set to work, immediately after it had seized almost every body, to cheer our drooping spirits, by proving, that to retrieve all our losses, it was only forthwith to commence raising silk-worms—to this, therefore, many of us hastened as to a last hope, and amongst the rest, your humble servant: one of my daughters persuaded me to the undertaking, and at it we went, with the honest purpose f doing our best. We bought three ounces f eggs, of two or three of the best varie- es of the worms, which cost $17.50: they atched at the usual time; began to spin ithout any night-feeding after nine o'clock, uite as soon as any which the papers re- orted to have been nursed night and day, ut they were watched and fed with unre- iitted attention, from daylight until bed- me, so long as their precious health re- uired particular care—indeed, I never saw iore bestowed, even upon the infant chil- ren of a family. The produce of these iree ounces of eggs, was only 13 bushels f cocoons, for which I have found no market nywhere near me, although I have been ld, that I may possibly get three and a alf or four dollars, if I will be at the trou- le and expense of sending them, at my own sk, as far as Baltimore or Philadelphia; ut if I could sell at the highest price, hich is not probable, as our cocoons are nly of medium quality, the balance, after educting the first cost, would be $34 50; iis pittance would be the whole earnings f my daughter, and at least six other per- ons, constantly employed for seven or eight eeks, in the hopeful business of nursing lk-worms, and taking care of their co- oons! Now, the least profitable of all the mployments they could have pursued, would ave brought them in more money, but then ey would have lost the brilliant chance of king rank amongst the disinterested and atriotic encouragers, of 'the silk culture f the United States!' who have been so trageously puffed from one end of the nion to the other; although, in fact, like l other originators of *new* schemes to suc- ed in the *old* business of making money, triotism had no more to do with their mo- ves, than had any other honest project, lely for the promotion of their own indi- dual interests! A due regard to this, is ways laudable in every body, and as such, ell deserves to be commended; but when e go so far as to ascribe it to 'love of untry,' as has been done most profusely this multicaulis and silk-worm business, must for one, protest against any such oss abuse of language.

"I should have added, that in our experi- ent we employed more than double the bour anywhere reported as sufficient, by ose who professed to know, and found it rely enough—that we occupied triple the ne for killing the moths in the cocoons, ther by steaming or the sun, when the ermometer ranged from 80 to 88°, yet any of the moths cut out afterwards—that ith all the drying we could give the co- ons, their *odour continued offensive to the last*—and though last, not least, that the ants and the wasps, the rats and the mice, proved themselves to be enemies in almost every stage of the business, and against which it was extremely difficult to guard effectually."

JACOB MYERS.

CRANBERRY MEADOWS.—Meadows that will bear good cranberries, will yield more profit than grass meadows. Two hundred bushels per acre, have often been obtained; and one man will harvest an acre at less expense than he will an acre of corn. A meadow, therefore, that will yield one-fourth of that quantity, will give more net profit than any acre of corn land, and save you the labour of planting, of tilling, and the cost of manure! Would it not be good policy to pay more attention to cranberry meadows? Nothing can be done to them at this season, unless we attempt to give them a top-dressing. This has been done in a few instances, and we cannot doubt that by a little attention, we could double the harvest on many of these valuable lots. Can it be doubted that a little coarse sand strown on the surface, would give a greater product on a cold meadow! Sand may be carried on and spread at this season, on many soft meadows, better than at any other.

Sand that has been saturated with the wash of the cow-yard, would be better than that directly from the pit. We hope some of our friends will look to this matter, and make some of their cranberry meadows more productive. It should not be forgotten, that flowing in winter and spring, has a most beneficial effect on the harvest. Meadows may be kept covered with water till late in May, and no doubt they would be improved by drawing the water off, and then flooding again, after a few days, as grass meadows are. By a little management of this kind, the June frosts would be prevented. Thousands of bushels were destroyed last season by the frosts of June.—*Mass. Ploughman.*

EXTRAORDINARY CROP OF OATS.—The New Genesee Farmer states, that Andrew Snider, of Henrietta, last season produced 446 bushels of oats, estimating them at the legal weight of 32 lbs. per bushel, on four acres of land, that is $111\frac{1}{2}$ bushels per acre. The kind is called the barley oat; it is properly the Scotch potatoe oat.

Three bushels of seed were sown to the acre. They were sown the last week in April. The land had been in corn, in peas, and in potatoes the previous year. The part which had been in corn and that which had been in potatoes, had been manured for those two crops; on that which had been in peas, wheat-straw only had been ploughed in.

Management of Milch Cows.

I have read with much interest the remarks of your able contributors on stock, and especially on milch cows; yet there is one particular in the management of them, which seems to have been passed over unnoticed—that is *milking*. Perhaps there is no point of dairying treated with so much neglect and indifference, and attended with so great a loss to the dairyman, as milking. Not more than 25 years ago, it was considered a good lot of cows to produce 200 lbs. of cheese to the cow on an average, and the farmer who obtained that, was a skilful dairyman; and even at the present day, many keep along in the same old track, doing well enough, as they term it, while others obtain 500 pounds, and some have gone as high as 600 pounds, and over, besides a good quantity of butter. How is this difference to be accounted for? One reason I would give, is milking. A cow, to give a large quantity of milk, should have one steady hand to milk—one that can draw the milk quick and easy; care should be taken to milk the cow perfectly dry, or in other words, clean. Another important object is to milk at regular hours. In long days, cows should be milked and turned to pasture before sunset, that the time between milkings may be nearly equal.

Yet the practice of some is to work in the field as long as they can see, then drive up the cows and have them milked by inexperienced hands, and those too, who take no interest in the business, and then leave them in a close yard during the night. I have always noticed, that those who make an odd job of milking, never realize much profit from their cows. That there is a great difference in cows, I will admit, though I think there is more in the management of them, than in the quality; yet the farmer should be very careful in the selection of cows for the dairy. I find some of my best cows would be considered worthless, if they had different hands to milk them, and those, too, who were inexperienced in the business. I am often told by my neighbours, that I have some peculiar method of making more cheese from the same quantity of milk than they; and it is true there may be something to be considered on this point; but I never as yet, have found the secret of making butter and cheese without milk.—*Boston Cultivator.*

If the coming season shall not prove a good one for honey, it will not be attributable to the friends of the bees.—We observe that *thirteen* patents for hives were granted last year.

Warmth in feeding cattle.—A late English paper states, that at the Clithere agricultural meeting, a communication was read from Professor Playfair, which contained the following facts worthy the attention of every farmer in a cold climate:

"Heat is an equivalent for food, and by knowledge of this fact, we may economize the latter very considerably. We know that cattle fatten much more slowly in winter than in summer; the reason being, that part of the food is expended in the production of the necessary heat. Lord Ducie was kind enough to communicate to me an experiment of his, on 100 sheep in the open air, and another 100 in the same space, with sheds to retire into at pleasure. The first lot ate 25lbs. of Swedes (turnips) per day, the latter only 20lbs.; although this lot, with five pounds a day less, had gained on an average, two pounds per sheep, more than the other, at the conclusion of the experiment."

Imagination.—That great old writer, Thomas Fuller, relates a curious incident, which is truly characteristic, showing how fancy will put life into young limbs, and confirming the old adage, that "conceit is as good as a consumption." A gentleman, he says, having led a company of children beyond their usual journey, they began to be weary, and jointly cried to him to carry them—which, because of their multitude, he could not do, but he told them he would provide them with horses to ride on. Then cutting little wands out of the hedge as nags for them, and a larger one for himself, they mounted, and those who could scarce stand before, now full of mirth, bounded cheerfully home.

A Good Cow.

Our friend, W. P. H., of Manayunk, inquires in the last number, in relation to "the most approved anatomical forms of cattle,—particularly the milch cow." We clip from "The Toronto Cultivator," the following description of a celebrated Durham cow, that was the lion of the day, at the meeting of the Darlington Agricultural Society, in England.—Ed.

She's long in her face, she's fine in her horn,
She'll quickly get fat, without oil-cake or corn.

She's clear in her jaws and full in her chine,
She's heavy in flank and wide in her loin,
She's broad in her ribs and long in her rump,
Has a straight and flat back with never a hump.

She's wide in her hips and calm in her eyes,
She's fine in her shoulders and thin in her thighs.

She's light in her neck and small in her tail,
She's wide in her breast and good at her pail,
She's fine in her bone and silky of skin,
She's a grazier's without and a butcher's within.

Cultivating Ground without Manure.

We take the following article from the New York Sun, of the 31st ult.

The London Gardener's Chronicle, conducted by Professor Lindley, brings to notice in the following article, the recent discovery in Germany, of a plan of superceding manure in cultivation:

(Communication on the art of cultivating the ground without manure.) By F. H. Bickes, Frankfort, on the Maine, 1842, pp. 31.

Wonders will never cease! While our agriculturists are eagerly discussing the comparative advantages of particular soils, and studying the theory of manures as propounded by Sprengel and Liebig, a countryman of these distinguished professors comes forward to proclaim that their labours are vain; for, if we are to believe him, he has discovered the art of growing luxuriant crops on the poorest lands, and without any manure whatsoever; and the cost of the process is so trifling, that for the acre of wheat or maize, it does not exceed five pence sterling; and for rape, cabbage, &c., amounts to only about half that sum. At first we were disposed to consider such extraordinary pretensions as an effusion of quackery, and entitled to little or no credit; but our incredulity has been somewhat shaken by the numerous and respectable attestations which the author has appended to his pamphlet, and which tend to prove that his method has been practised with success, during the last twelve years, in various parts of Germany and Holland. Thus the certificates from Vienna, dated in 1829 and 1830, declare that Mr. Bickes's process, which would seem to consist in some preparation of the seed, "renders all dunging unnecessary, is applicable to the poorest soils, and to all sorts of plants, and imparts to them a wonderful degree of vegetation and fulness;" and they gave the results of the experiments in the Imperial garden of the Chateau, from which it appears that wheat raised from seed sown by Mr. B., had larger ears and more grains than that produced from unprepared seed; that the barley showed ears with four rows and a larger number of grains, while that from unprepared seed, had only two rows and a smaller proportion of grains on each stalk; and the Indian corn exhibited a larger number of much stronger and thicker heads.

At Bundingen, again, some plants of the sunflower, treated according to Mr. B's method, grew to the height of 10 to 11 feet, with woody stems of eight and a half to nine inches in circumference. Ten or twelve potatoe plants, of a large yellow sort, called Marburger, yielded each, on the average, 30 good sized tubers, with stem and branches seven feet long; and maize, which grew partly singly and partly in rows, had from two to five, and in some instances, as many as eight and nine heads. These crops were obtained in the garden of Count Isenburg; and we are further assured by the certificate, to which are attached the signatures of two burgomasters, the court gardener, a grand ducal counsellor, and other official personages, that they were raised in ground but partially dressed, and in the midst of tall weeds! The trials of this method in Holland, made in the summer of 1834, were attended with results not less astonishing: prepared wheat and rye, though sown thick, gave from 50 to 60, and even 80 stalks from one grain; and a plant of barley bore eight large ears. Buckwheat rose to four and a half and five feet: flax had four and five stems from one seed, and Indian corn grew from nine to ten feet in height, with four to five heads from a single corn. The green crops were equally luxuriant.

Liebig's Agricultural Chemistry, which has been republished in one of the cheap editions of the New World, teaches us that *ammonia* is the great stimulant to the growth of plants. At one of the late agricultural meetings in London, Dr. T. C. Jackson suggested that seeds might be coated with some gummy substance, and then rolled in guano, enough of which would readily adhere, to produce all the effects ascribed to those foreign prepared seeds,—the new plan being a secret.

A mere tea-spoonful of guano, applied to a newly struck rose cutting, of a few inches in length, had been sufficient, the following spring, to produce a bush of some six feet in height. It is the received opinion, that the nourishment of vegetable life is derived from the atmosphere.

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

Philadelphia, Fourth Month, 1843.

In the early part of last month, the public curiosity was considerably excited by the appearance of an unexpected and remarkable comet, which is said to be "second in splendor only to the memorable one of 1680."

Sears C. Walker, in communicating some observations made upon it at the High School Observatory in this city, describes it as "one of the most remarkable that has ever appeared in the history of the world, for its physical peculiarities." According to the calculations of Encke, a noted German astronomer, the comet of 1680, in its nearest approach to the sun, was within

600,000 miles of its centre. The present comet, according to the calculations of our fellow-townsman, Professor Kendall, was on the 26th of second month last, when nearest the sun, but about 800,000 miles from its centre. Now the sun's semi-diameter is about 440,000 miles: both these comets then, must at one time have been considerably nearer to the surface of the sun, than the length of his semi-diameter! The earth's distance from the sun, is about 96,000,000 of miles: our late visitant therefore, when nearest, must have approached within $\frac{1}{20}$ part the distance that we ourselves are, from that great centre of our system! With what amazing velocity must it have been hurried on, to prevent its gravity from forcing it to the body of the sun! We dwell with astonishment on the inconceivable rapidity with which these bodies whirl round the sun, at the instant of their perihelion passage. That of the comet of 1680, was such, that if continued, it would have carried it ten times round the sun in one day: and the present comet, it is said, would have gone five times round the sun in the same time. In fact, it did go half round in about four hours—from two hours before, to two hours after reaching its nearest point.

Professor Kendall and S. C. Walker, have computed the elements of this comet with great care, and find they do not agree with those of any one on record: it is therefore, in all probability, to be hailed as a new visitant, within the limits of our system. Its train or tail, was very remarkable for its extent—stretching, according to Professor Loomis, of the Western Reserve College, Ohio, "over 45 degrees in length." "The nucleus, or head," continues the Professor, "was much smaller than might have been expected from its train —it was nearly circular—its outline ill defined, as usual, and increasing in brightness towards the centre."

Time was, when the appearance of so strange a visitor flaming through the heavens, spread terror and consternation abroad. That time, we trust, has in a great measure passed away. "Throughout the economy of nature," says Professor Olmsted, "all powers are so balanced, that each keeps the other in check." The same universal law which draws the stone to the earth and retains the moon in her place, exerts its influence over every motion of the comet, and having been given by the Supreme Intelligence, is a guaranty that order and harmony shall prevail, as well in the most remote regions of space, as within the limits of our own comparatively narrow system.

Professor Vince, in his Astronomy, says that "from the beginning of our era to this time, it is probable, according to the best accounts, there have appeared about 500 comets." It is remarked by a writer from Brown University, in a communication to the Providence Journal, dated the 9th ult., that of this number, "the orbits of about 140 have been computed. The orbits are nearly all of a parabolic form—that is, the path of the comet does not return into itself." In relation to the comet of 1680, which Sir I. Newton believed to have gone off in a parabola, never to return, Encke, the great German astronomer, "has found that a periodical return of 14,000 years, would correspond better with the observations, than the supposition that it had moved away in a parabola!"

"Three comets only,"—we quote again from the anonymous writer from Brown University—"are known to revolve in ellipses, and to return at regular intervals:—they are the following:

"1. Halley's, which has a period of 76 years. It passed its perihelion on the 16th of November, 1835," having arrived there within two days of the time assigned for its return, by Pontécoulant, a distinguished French astronomer. "It will not again return till the year 1911.

"2. Encke's, which has a period of about 1207 days. This was last seen in the spring of 1842. Its next return will be in the summer of 1845.*

"3. Biela's, having a period of about 6¾ years, or more exactly, 2461 days. Its last return was in 1839. The next will be in 1846."

We regret to learn, as we do from the U. S. Gazette, that "the only astronomical establishments in the U. States, capable of furnishing observations of any value by the side of the European, are the High School Observatory of this city, in charge of Professor Kendall, and the Hudson Observatory, under Professor Loomis, in Ohio." This, we think, ought not to be so. And we trust, that for the credit of our country, cause for the complaint, will not much longer be suffered to exist.

Our friend, H. L. Ellsworth, Commissioner of Patents, will please accept our thanks for his late Report to congress, showing the operations of his office during the year 1842. The labour and care incident to throwing before the country such an amount of interesting matter, only remotely connected with the duties of his department, show an industry and zeal in the cause, worthy of a high public officer. That part of the Report which has reference to the agricultural statistics of the country, particularly attracted our attention, and we regret our inability at this time, to draw more largely from it.

Our present population may be set down at about 19,000,000 of souls. From an estimate of crops for the past year, we learn that more than 441,000,000 of bushels of Indian corn—150,000,000 bushels of oats—102,000,000 bushels of wheat, and 135,000,000 bushels of potatoes, were harvested. Of these, Tennessee grew the greatest amount of Indian corn, to wit: about one-eighth of the whole. New York was the greatest producer of oats, having grown about one-sixth of the whole. Ohio was the greatest grower of wheat, her produce being about one-fourth of the whole; while New York again bears the palm in the production of potatoes. Her yield was more than 36,000,000 of bushels—nearly treble that of Pennsylvania, the next largest grower of this root—and more than one-third as many as all the other States. Mississippi is the greatest grower of cotton—South Carolina, of rice—Virginia, of tobacco, and Louisiana of sugar: and—which is well worthy of remark,—Vermont, Ohio and Connecticut, are the next greatest producers of this article!

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* "The positions of this comet," says Gummere, in his Astronomy, "at its recent return in 1842, as observed on several evenings by Professor Kendall, in Philadelphia, were found to be within 30'' of space of its positions, as given in Encke's Ephemeris, previously computed. This affords a striking evidence of the accuracy of the investigations and computations of its orbit and motion."

"The progress of improvement in agriculture," says the Commissioner, "though gradual, is yet steady. The importance of this branch of industry, is beginning to be more and more appreciated. The whole country is more or less interested in it, as it furnishes, besides what is consumed at home, at least three-fourths of all the exports of the United States." The feeling, with reference to the silk culture, is said to be settling down on a more assured basis. "While some, remembering only the days of the morus multicaulis speculation, smile, and turn with incredulity from its very mention, others have learned to discriminate between the solid and the imaginary, and are realizing, if not the golden dreams of past years, at least a fair profit," from which they are indisposed to be turned aside, even by the ridicule of their neighbours.

Very favourable results are reported from different quarters, of imperfect experiments made for the purpose of ascertaining, whether sugar could really be made with any probability of profit, from the corn-stalk. Indeed Professor Mapes, of New York, throws out an idea of the possibility, that the corn-stalk may eventually prove superior even to the sugar cane! But this we trust, need not alarm the great possessor of the Louisiana cane-brake.

The importance of the manufacture of lard oil, too, and the various purposes to which it is applied, claim an interesting notice in the Report. Some calculations that are given in relation to this subject, show that we are hardly aware of its magnitude. To the West, particularly, where hogs may be raised almost without limit, and with very little expense, it would seem as if the new purposes to which lard is to be appropriated, may open a demand for it, of such an extent, as we have now no idea of. A single firm in St. Louis, has worked up, in four months, more than 18,000 bushels of castor beans, yielding nearly as many gallons of oil, worth $50 per barrel. It appears among the possibilities of our day, that should a market be opened to us, the export of oil, pork, and lard, may become equal to that of cotton, our heaviest staple.

Thus, it would seem—to use the language of our brother editor, of the Farmer's Register,—"as one great production of our country declines in value, it is confidently anticipated that others, the culture of which is equally practicable, and no less profitable, will be gradually introduced." We know not how better to conclude these remarks, than in the language of the Commissioner: "That country which produces beef and pork to most advantage, and especially if wheat is also added, must excel in Agricultural profits."

By a private letter from Petersburg, Va., of the 14th ult., we learn that "our friend, E. Ruffin," late editor of the Farmer's Register, "is in South Carolina, actively engaged in the duties of his appointment. No situation could suit him better; for he is a warm admirer of that State, and the chief object of the agricultural Survey, is to develope its marl resources. He will doubtless confer great benefits on the South, by the energy and completeness with which he will discharge his duties. Every thing connected with *marl*, has irresistible attractions for him."

We gather from the Southern Agriculturist, that on the Cooper—the Ashley, and indeed on nearly all the rivers of the State, and far in the interior, inexhaustible beds of marl have been, or will be discovered. And in a letter from Edmund Ruffin to the editor of the Charleston Mercury, he shows his opinion of the value of the South Carolina marl, by recommending an immediate and free use of it by the farmers. He says, "every acre marled this year, will, by its effects shown, probably induce the marling of 20 the next, and 100 the year after." Indeed we shall be disappointed if the use of marl in the Southern States, does not open a new era in Southern agriculture.

"HISTORY OF THE GREAT REFORMATION

Of the sixteenth century, in Germany, Switzerland, etc., by J. H. Merle D'Aubigné, President of the Theological School at Geneva, and member of the 'Société Evangelique.' Published by James M. Campbell, 98 Chestnut Street, Philadelphia," in one vol. octavo., and at the very low price of one dollar, in fancy cloth.

This volume, which has been handed us by the publisher, has rendered our table more than ordinarily attractive, within the last few days.

To achieve great results by imperceptible means, is one law of the Divine Economy; and our author has brought before us a strong illustration of this truth, in the gradual, but almost unperceived workings of those great principles of the Reformation, which he has traced, we believe, with great fidelity, and certainly with no ordinary ability, and general satisfaction to the reader. While we feel disposed to demur a little at the impression left upon the mind in relation to the character of Erasmus,—and particularly that part of it which leads us to believe that "in him, Christianity was second to learning," we are delighted with the writer's description of the life and character, and labours of Luther. It cannot fail to rivet the attention, when once the subject is got hold of: "the high priest of Christendom, as he speaks from the balcony of his Basilica," is not a personage of higher import, than "the monk of Wittemberg," who is operating in the heart, and amidst the forests of Germany.

The book may be had of the publisher, or of Kimber and Sharpless, 50 North Fourth street.

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"THE FARMER'S ENCYCLOPÆDIA

AND

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Embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by Cuthbert W. Johnson; enlarged, improved and adapted to the United States, by a *Practical Farmer*, assisted by numerous scientific gentlemen, is now in course of publication by Carey & Hart, of this city."

The third and fourth numbers of this work have appeared since our last, and fully sustain the high character of the others before published.

Inquiry was made in our last number, in relation to the Hamburg, or Poland top-knot breed of fowls:—Michael Krouse, who stands in Market street, between Tenth and Eleventh, with his stall so richly loaded with fine poultry, and his glass cases so handsomely furnished with stuffed specimens of different breeds of fowls, can tell all about them; as can also Dr. Emerson, of this city.

SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. The money to be paid in advance.

POUDRETTE.

Arrangements have been made by the subscriber with D. K. Minor, of New York, for the sale of this valuable manure, as noticed on page 288. It may be obtained at the office of the Farmer's Cabinet, No. 50, North Fourth street, where we expect to keep a supply constantly on hand. Farmers, gardeners, and the truck growers in New Jersey, will now have an opportunity to avail themselves of an article, so much valued in Europe, and in the neighbourhood of New York, where it is manufactured. The price will be two dollars a barrel, where one or two only are taken—for three or more, it will be somewhat reduced.

Josiah Tatum.

☞ Joseph Willis, who has for several years acted as agent for our paper in Delaware and parts of Maryland, is *no longer authorised to receive monies on our account.* Such of our friends as have heretofore paid their subscriptions to him, can, by availing themselves of the kindness of post-masters, or by other means, readily communicate directly with this office. When remittances are made by mail, receipts will be forthwith returned.

C. P., a writer in the U. S. Gazette, who knows all about the weather, says, "there has not been so cold a month of March, for forty years, as the one just closed."

The quantity of rain and melted snow, which fell during the Third month, (March,) 1843, was nearly four inches and a half. .... 4.415 inches.

Pennsylvania Hospital, Fourth mo. 1st, 1843.

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THE FARMERS' CABINET,

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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PROPRIETOR AND PUBLISHER,
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Price one dollar per year.—For conditions see last page.

For the Farmers' Cabinet.

Irrigation, Lime and Manure.

The first essay in the last number of the Cabinet on Irrigation, brings into view a subject that has been too much neglected since the practice of raising artificial grasses has become so universal. Many years since much attention was paid to watering meadows, as it was then called, and a great advantage would still be gained by making available every spring or rill of water. It is the cheapest mode of increasing the productions of grass, as no manure or tillage is required; the water conveys the salts with which it is impregnated, to the roots of the grass where they are needed, and as all water holds air in solution, and generally carbonic acid gas, which is the main food of all plants, this precious substance is deposited by the water exactly where it is most wanted. Spring water and that impregnated with lime, produce the most striking effects, as they contain most saline matter and carbonic acid gas.

Judgment and skill should be brought into requisition in watering grass grounds, otherwise the expected benefits may be much diminished, and care should be taken to carry the water away in a ditch judiciously arranged, after it has performed its functions on the higher grounds, and not suffer it to produce a quagmire covered with sour grass on the lowlands, by stagnation. Keep the water in motion, if it is designed to derive benefit from its application, for if it comes to a stand-still, it does more harm than good. It is hoped benefit will be derived from stirring this *moist* subject.

The next essay on Lime and Magnesia, by a Delawarian, is well done and will bear reading over again. It is now well known that every soil distinguished for its fertility, contains both lime and magnesia in combination with clay and sand, and more or less vegetable matter, and various proportions of minor ingredients in small quantities. But chemists inform us, that they always find lime and magnesia in every good soil, either artificially applied, or in its native location; hence we may rationally conclude, they are exercising very important and indispensable functions in the vegetable economy. Many whose farms are remote from the limestone vallies, are not aware that these precious substances exist in quantities in an invisible form, in the soil they are daily cultivating, and that they are annually reaping the benefit of them in their crops. The hornblend rocks and stone which are abundant in Chester and Delaware counties, contain from 10 to 12 per cent. of lime and magnesia, and by their slow decomposition, furnish a larger per centage to the soil than is ordinarily applied by farmers, and yet these soils are often benefited by an artificial application of lime. The good of lime is never experienced, till it undergoes *solution* and permeates the soil as a fluid; and it only dissolves thoroughly when it becomes a supercarbonate, by the absorption of an excess of carbonic acid gas; hence it is found to be most advantageously applied by spreading it on the grass as a top dressing in autumn, where it is exposed for the longest possible time to the action of the atmosphere. Those who are ignorant of the nature of lime, plough it under immediately after spreading it, under the mistaken apprehension of its good qualities being lost by exposure. This is now known to be the worst plan that can be adopted, as it too soon finds its way down without the aid of the plough. "Too much of a good thing is good for nothing;" so where a soil is sufficiently charged with calcareous earth to promote healthy and vigorous vegetation, more can do no good, and this is equally true in regard to any other description of manure.

Lime renders a stiff soil more loose and friable, by which the pasture of plants is extended, and the air is admitted to a freer circulation through it, by which carbonic acid gas is formed to feed them, and a cold soil is rendered warmer by increasing its friability. Lime preserves vegetable manure, and causes its action to be continued for a longer time; it neutralizes acidity in the soil by its alkaline properties; it diminishes the injury from drought, and acts as a specific food for plants, as is evident from its being found in them as a component part of their structure.

The "Small Farm" principle upon a large scale, page 282, last number, is in my view, the most valuable essay in the number, and ought to be read attentively by every farmer. Some more "last words" from the same author, would be very acceptable. The rotation of crops there laid down, cannot be beat; it gets the manure out early in the spring, when it should always go to the fields, instead of rotting and wasting all summer in the barn-yard. Top-dressing is the thing to make grass grow, and then plough it down, and grain or any thing else will grow and flourish; no mistake about it, try it yourself, and see if it won't do better than the old plan, of wasting one half and misapplying the other half, at the worst season of the year for applying barn-yard manure. Top-dressing has always been old mother nature's plan of applying nutriment to plants; she seems never to have changed it, which it is probable she would if it had not been the best way. Let us go on then, and assist her in carrying out her plans for our benefit, and see if it won't work well. I had intended to make some remarks on other essays in the same number, but I fear too much space has already been occupied in your valuable journal. Agricola.

The Honey Bee.

The following extracts are from a delightful article on the Honey Bee, in the last No. of the London Quarterly Review.

The "masses" of every hive consist of two kinds of bees, the workers and the drones. The first are undeveloped females, the second are the males. Over these presides the mother of the hive, the queen-bee. The number of workers in a strong hive is above 15,000, and of drones, about one to ten of these. This proportion, though seldom exact, is never very much exceeded or fallen short of. A single family, where swarming is prevented, will sometimes amount, according to Dr. Bevan, to 50,000 or 60,000. In their wild state, if we may credit the quantity of honey said to be found, they must sometimes greatly exceed this number.

"Sweet is the hum of bees," says Lord Byron; and those who have listened to this music in its full luxury, stretched upon some sunny bed of heather, where the perfume of the crushed thyme struggled with the faint smell of the bracken, can scarcely have failed to watch the little busy musician,

"with honey'd thigh,
That at her flowry work doth sing,"

too well to require a lengthened description of her; how she flits from flower to flower, with capricious fancy, not exhausting the sweets of any one spot, but, on the principle of "live and let live," taking something for herself, and leaving as much or more for the next comer, passing by the just-opening and faded flowers, and deigning to notice not one out of five that are full-blown, combining the philosophy of the Epicurean and Eclectic;—or still more like some fastidious noble, on the grand tour, with all the world before him, hurrying on in restless haste from place to place, skimming over the surface or tasting the sweets of society, carrying off some memento from every spot he has lit upon, and yet leaving plenty to be gleaned by the next traveller, dawdling in one place he knows not why, whisking by another which would have amply repaid his stay, and still pressing onwards as if in search of something, he knows not what—though he too often fails to carry home the same proportion of happiness as his compeer does of honey.

"A bee among the flowers in spring," says Paley, "is one of the cheerfulest objects that can be looked upon. Its life appears to be all enjoyment: *so busy and so pleased.*"

The drone may be known by the noise he makes. Hence his name. He has been the butt of all who have ever written about bees, and is indeed a bye-word all the world over. No one can fail to hit off his character. He is the "lazy yawning drone" of Shakspeare. The

"Immunisque sedens aliena ad pabula
fucus,"

of Virgil. "The drone," says Butler, "is a gross, stingless bee, that spendeth his time in gluttony and idleness. For howsoever he brave it with his round velvet cap, his side gown, his full paunch, and his loud voice, yet is he but an idle companion, living by the sweat of others' brows. He worketh not at all either at home or abroad, and yet spendeth as much as two labourers: you shall never find his maw without a good drop of the purest nectar. In the heat of the day he flieth abroad, aloft, and about, and that with no small noise, as though he would do some great act; but it is only for his pleasure, and to get him a stomach, and then returns he presently to his cheer."

It has been often discussed whether a country can be overstocked with bees; we believe this is quite as certain as that it may be over-peopled and over-manufactured. But that this is not yet the case with regard to Britain, as far at least as bees are concerned, we feel equally sure. Of course it is impossible to ascertain what number of acres is sufficient for the support of a single hive, so much depending on the season and the nature of the herbage; but, nevertheless, in Bavaria only a certain number of hives is allowed to be kept, and these must be brought to an establishment under the charge of a skilful apiarian, each station being four miles apart, and containing 150 hives. This is centralization and red-tapery with a vengeance! A story is told, that in a village in Germany, where the number of hives kept was regulated by law, a bad season had nevertheless proved that the place was overstocked from the great weakness of all the stalls in the neighbourhood. There was but one exception. This was the hive of an old man, who was generally set down as being no wiser than his neighbours, and this perhaps all the more, because he was very observant of the habits of his little friends, as well as careful in harvesting as much honey as he could. But how came his hive to prosper when all the rest were falling off! His cottage was no nearer the pasture. He certainly must have bewitched his neighbours' hives, or made "no canny" bargain for his own. Many were the whisperings and great the suspicions that no good would come of the gaffer's honey thus mysteriously obtained. The old man bore all these surmises patiently; the honey harvest came round, and when he had stored away just double what any of the rest had saved, he called his friends and neighbours together, took them into his garden and said—"If you had been more charitable in your opinions, I would have told you my secret before—

This is the only witchcraft I have used:" and he pointed to the inclination of his hives—one degree more to the east than was generally adopted. The conjuration was soon cleared up; the sun came upon his hives an hour or two sooner by this movement, and his bees were up and stirring, and had secured a large share of the morning's honey, before his neighbours' bees had roused themselves for the day. Mr. Cotton, who gives the outline of the story which we have ventured to fill up, quotes the proverb that "early birds pick up most worms," and draws the practical moral, in which we heartily concur, that your bed-room window should always, if possible, face the east.

In an arable country, with little waste land and good farming, very few stocks can be supported; and this has led some enthusiastic bee-masters to regret the advancement of agriculture, and the consequent decrease of wild flowers—or weeds, according to the eye that views them—and the enclosure of wastes and commons. Even a very short distance will make a great difference in the amount of honey collected. We know of an instance, where a bee-keeper at Carshalton, in Surrey, suspecting, from the fighting of his bees and other signs, that there was not pasturage enough in the immediate neighbourhood, conveyed away one of his lightest and most worthless hives, and hid it in the Woodmansterne furzes, a distance of about a mile and a half. Fortunately it lay there undiscovered, and on removing it home, he found that it had become one of his heaviest hives. We mention this as a case coming under our own knowledge, because a late writer, who has shown rather a waspish disposition in his attacks on Mr. Cotton's system, seems to question not only the advantage, but the practicability of the transportation of hives altogether. But the fact is, that in the north of England and in Scotland, where there are large tracts of heather-land apart from any habitation, nothing is more common than for the bee-masters of the towns and villages, to submit their hives during the honey season, to the care of the shepherd of the district. "About six miles from Edinburgh," says Dr. Bevan, "at the foot of one of the Pentland hills, stands Logan House, supposed to be the residence of the Sir William Worthy, celebrated by Allan Ramsay, in his "Gentle Shepherd." The house is at present occupied by a shepherd, who about the beginning of August, receives about a hundred bee-hives from his neighbours resident beyond the hills, that the bees may gather honey from the luxuriant blossoms of the mountain heather." Mr. Cotton saw a man in Germany who had 200 stocks, which he managed to keep all rich, by changing their places as soon as the honey season varied. "Sometimes he sends them to the moors, sometimes to the meadows, sometimes to the forest, and sometimes to the hills." He also speaks of its being no uncommon sight in Switzerland, to see a man journeying with a bee-hive at his back.

THERE are cases in which a little common sense is of more value than a great deal of calculation.

From the Tennessee State Agriculturist.

Improve your Home, &c.

Is it not the desire of all parents, that their children should love home? if so, beautify and adorn your homes, so as to make them the most pleasant and loveable place to them.

"The spring time is coming," the season when dame nature decks herself in her gayest attire, and all things living, seem endued with new life and vigor. Begin then with nature; she will lend you kind assistance; plant trees, fruits and flowers, tend, work and water them, let your children assist you, give each his portion in the labour of love—who that ever planted a flower, and watched it from the time of putting the unsightly root into mother earth, to the first peeping forth of the green leaf, to the full expansion of its beautiful bloom, but looks back with pleasure on his sensations of delight and exultation, as he culled it for the one he loved best? How his face glowed and his heart beat, as he eagerly displayed the prize! Who can walk in the garden at dewy eve or rosy morn, inhaling the delightful perfume rising as incense to the Giver of all good, from every bud and flower, and not feel his own heart lifted up in praise for so many blessings? The mind is naturally led to harmonious reflections, by contemplating nature in her most alluring forms. Adorn your homes then with all her choice productions, so that in after life, when your children are surrounded with care and trouble, home will rise up as a green spot in memory's waste. Let your children share your pursuits, it will make them love home better, more affectionate toward each other, and give them more confidence in you; they will find there is indeed "no place like home;" instead of an irksomeness and reserve in your presence, they will feel confidence, and consider you their best friends and companions.

Are not the Swiss and Scotch attached to their wild, rugged, and often barren country, more than any other people? It is because they bestow more labour on it, they toil incessantly in tilling the earth, and feel more affection for that spot. In most countries, the great struggle is, to keep the homestead from generation to generation, while we still continue the "squatting" propensities of our forefathers; our children, like a flock of birds, leave us as soon as fledged—not but I would have them independent, have them so by all means, and to have them so, I would do away the great love of speculation, the making haste to be rich, the effects of which so many are sinking under at this very time: and make our boys *quiet*, *sober* and *intelligent* men, our girls *well informed*, cheerful, healthy, amiable and affectionate. If you wish your boy to be a good son, good brother, good husband and good man, make him love home, it will also deliver him from the manifold temptations that beset a young man's path—he will, by sharing his mother's and sister's pursuits, acquire a greater interest in them, and have a more affectionate regard and greater sympathy with them; it will rub off the rough points of his character, refine and polish him, strengthen and exalt the mind of the sister, add ease and grace to their deportment with the rougher sex. By making home agreeable, you heighten the affection of your children for yourselves, and prevent their seeking enjoyment and amusement elsewhere—you will have them more under your parental eye, and thus be able to check many an embryo fault kindly and gently, which, if left unrestrained, would wring many a tear of anguish from your hearts. Has not the Father of *all* made this universal garden beautiful and lovely in the extreme? Is it not enriched with all that is pleasant to the eye and grateful to the taste; even every thing that the heart of man can desire, to make this, our temporary home, a paradise; and shall we not follow such a glorious example, and make the transient home of our children pleasant and sweet. By adorning and making them pleasant within and beautiful without, they will in truth say, "there is no place like *home*." Aunt Charity.

Franklin, Jan. 1843.

For the Farmers' Cabinet.

Salt for Grub Worms.—A correspondent of the New Genesee Farmer says, that after finding the grub worm was cutting off his corn and cabbages at a sad rate, he first applied ashes, then soot, and then Scotch snuff to the hill, hoping to destroy or drive away the worm, but it was all to no purpose. Afterwards, seeing it stated that *salt* was very disagreeable to the grub, he applied about two table spoonfuls to each hill of corn or cabbage, placing it so as not to touch the plant. The worms left them immediately.

Another says, that by putting about "a pinch" of salt to each plant, two or three times, the worm ceased his depredations. He also mentions a neighbour, who watered his cabbages daily with water from a salt pork barrel, and was not troubled; but as soon as he discontinued the practice, his plants were attacked, equally with his neighbours. L.

For the Farmers' Cabinet.

Root Culture.

The cultivation of roots is one of the modern improvements in agricultural science: they double the amount of provender and treble the amount of manure, and afford a healthy and succulent food that is eagerly sought after by cattle. They meliorate their condition, and would serve to soften the rigors of winter in the peculiar satisfaction which cattle manifest after feeding, and anxiety to obtain them. One acre to roots, will yield green food enough to winter as many animals as four acres of grass would do, estimating the yield to be from one and a half to two tons per acre.* The revolutions in husbandry that have followed the introduction of root culture, have been of a permanent character, and which it would be impolitic to dispense with; for while it has already materially aided in perfecting the system of agriculture in those countries where it has been longest known, it is apparent that to its influence we owe a more perfect one in our own. Germany has long felt the importance of the turnip; and the beet culture of France now furnishes annually one hundred million pounds of sugar for human consumption; while the refuse of the beet gives the French the best of beef and mutton, a luxury it is said but seldom enjoyed before the introduction of the sugar-beet. Again, the culture of the carrot occupies a large share of the attention of the people of Flanders, a people known extensively for the skilful management of their agricultural concerns. Their husbandry too, enjoys a more elevated reputation for profitableness, than that of any other country. In Great Britain, the introduction of root culture is considered as important to husbandry, as the application of steam to the manufacturing art. The praise of English beef is due to the turnip, a luxury highly extolled, and of which John Bull vauntingly boasts. In confirmation of what is here said, the following remarks from the New Edinburgh Encyclopedia, are offered: "The introduction of turnips into the husbandry of Britain, occasioned one of those revolutions in rural art, which are constantly occurring among husbandmen; and though the revolution came on with slow and gradual steps, yet it may now be viewed as completely and thoroughly established. Before the introduction of this root, it was impossible to cultivate light soils successfully, or to devise suitable rotations for cropping them with advantage. It was also a difficult task to support live stock through the winter and spring months; and as for feeding and fatting cattle and sheep for market, during these inclement seasons, the practice was hardly thought of, and still more rarely attempted, unless when a full stock of hay was provided, which only happened in a few instances. The benefits derived from turnip husbandry, are therefore of great magnitude: light soils are now cultivated with profit and facility; abundance of food is provided for man and beast; the earth is turned to the uses for which it is physically calculated; and by being suitably cleaned with this preparatory crop, a bed is provided for grass-seeds, wherein they flourish and prosper with greater vigor than after any other preparation." J. N. Keeler.

Feb. 19th, 1843.

For the Farmers' Cabinet.

Gate-posts and content of corn-cribs.—Farmers often want to know how much corn they have in their cribs, or how much grain they may have in the bins in their granaries. To do this, they have only to level the grain on the top, multiply the length of the crib or bin, by its width, and this again by its depth in feet and inches. This will give the content in cubic, or solid feet. Now as there are 1728 cubic inches in a foot, and 2150 in a bushel, we perceive that it takes just about five cubic feet to make four bushels. From the number of solid feet then, in a crib or bin, subtract one fifth, and you have the content in struck bushels, very nearly. If the crib is not of equal width, take the mean width: and if the corn be in the ear, about one half will show the number of bushels of shelled corn.

There is often considerable difficulty in preventing the post to which a gate is hung, from swagging or leaning towards that against which it shuts. I have discovered a simple remedy; and that is, instead of selecting a straight stick for a post, select one that has a considerable crook, or angle at the surface of the ground when set. The post then being properly placed in the ground, with the bottom pointing in a direction towards the post, against which the gate is to shut, its crook or angle will counteract the tendency of the weight of the gate to draw the post over towards itself, and thus prevent the leaning that is often so troublesome. S. M. S.

Staunton, Del.

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* It is scarcely necessary to observe, that we would ever wish our readers to remember, that we are not responsible for the opinions of our correspondents.—Ed.

For the Farmers' Cabinet.

Lime.

Messrs. Editors,—Your correspondents on both sides of the question, seem to admit that an over dose of magnesian lime is hurtful to vegetation for a season; which appears to be about as much as we are to expect in the way of agreement; but it must not be supposed, that no good has been derived from the agitation of the subject in the pages of the Cabinet—I for one, have reaped much information, and have been led to think and to act upon it, with the expectation of deriving pleasure as well as profit from the labour of our intelligent friends. And in the mean time, I would copy for insertion in your pages, the following short, but very seasonable and highly judicious remarks, from an article on the same subject, contained in the second volume of "Memoirs of the Philadelphia Agricultural Society, by John Lang." The writer observes:

"It will be admitted, that all animal and vegetable matter contained in the soil, must undergo a decomposition by some means or other, so that being thereby reduced to such a state as to be easily soluble in water, it may be absorbed by the roots of plants; and that these roots naturally possess, to a considerable degree, the power of producing this decomposition, I have had occasion more than once to observe, in the case of planting potatoes with woollen rags instead of dung. I have seen fine crops raised, merely by dropping a small piece of woollen rag, not larger than the hand, with every set of the potatoe; and have observed, when the potatoes were gathered in the fall, that in every instance where a potatoe plant had failed to vegetate, the rag was turned up almost entire, and very little wasted by being buried under the ground; whereas, not the smallest vestige of a rag was to be seen, where the plants had grown to perfection.

"But there are other animal and vegetable substances, which require more powerful solvents to prepare them for the food of plants; such substances, therefore, must be decomposed, either by means of the putrid fermentation, or by the application of hot lime, &c.; but while the putrid fermentation is going on, it is exceedingly noxious to vegetation, as we may see by the bad effects of putrid or stagnant water upon the roots of tender plants; while, on the other hand, hot lime will check the progress of putrefaction, and at the same time very quickly effect the decomposition of various bodies; thereby preparing sweet and wholesome juices, whether they consist of carbon, phosphorus, oils, or alkali; or compounds of all or either of these. And I conceive, if the lime meet with a sufficient quantity of such substances, as it in this manner acts upon, it will, by mixing with them thus prepared, be thereby deprived of its caustic quality, in the same, or somewhat similar manner, to that whereby magnesia or chalk, blunts or sheaths the points of the sharp particles of acids. But if the lime does not meet with a sufficient quantity of carbonic, or other matter in the soil to act upon, so that its caustic quality may be overcome, then, in such case, it will act upon the tender roots of the growing plants, in the same manner as it acts upon grass or other vegetables, when laid in heaps upon the surface: and this, in my opinion, is the cause why lime, in some instances, is hurtful, instead of being beneficial to land. Upon the whole, therefore, instead of troubling ourselves about distinguishing the different qualities of *magnesian* and *calcareous* lime, it would be better to use lime sparingly on poor land, and at the same time, to use every exertion to increase our dung and compost heaps, whereby our land will be prepared for the application of lime, not only with safety, but to great advantage."

In conclusion, I have now before me, a field of five acres, which, three years ago was *poisoned*, by having a very thick covering of magnesian lime spread upon it, although it was well worked into the soil and seeded, unaccompanied by any other crop, with a variety of grass seeds; the sod becoming thickly covered with dwarf or sheeps-sorrel, exceedingly to the annoyance of the owner; but which has been completely recovered, by a very thick coat of rich dung, repeatedly brushed into the sod; the herbage the present year, being very fine and sweet, and yielding three cuttings of great luxuriance, for the soiling of cattle. P. S.

Bucks co., Nov. 15th, 1842.

The business of husbandry brings men acquainted with the condition and mystery of all inland trades, inasmuch as they all depend on and have relation to the plough, in which all interests are interwoven; nor can a discouragement fall on husbandry, occasioned either by bad seasons or untoward circumstances, but the artisan, the merchant, and even the sovereign on his throne must feel it.

If gentlemen would use such methods to attain a skill in husbandry, as they do to become masters of any other art or science, they would soon find an entertainment in it, not unworthy the most exalted genius.

For the Farmers' Cabinet.

An economical Boiler.

While on a visit to Mr. John Kirkbride, at Morrisville, Pa., I saw a boiler, which is, I think, admirably adapted to the uses of a large farm, where the system of cooking food for cattle is followed. It is remarkably simple in its construction, and on a principle which must tend greatly to the saving of fuel. It consists of a stout and long wooden box, through the end of which, and within about an inch of the bottom, an iron or copper pipe enters and passes to the other end; it then turns by an elbow, and again traversing the bottom of the box, passes out at the end at which it entered, leaving a space of a few inches between the two openings. The pipe is larger at its entrance than its exit, and is kept firm, steady and water tight, by flanges well nailed around, on rings of cloth and putty. In the largest mouth of this pipe the fire is made, either of light wood, corn-cobs, &c., and a strong current of air passing in with it, the flame is carried through the pipe with the greatest velocity; the smaller end of the pipe serving the purpose of a chimney for the smoke. Thus the water in the box comes into close contact with the fire-pipe on all sides, the double length of the box and the return elbow at the end; and nothing intervenes to rob it of the force of the fire; nor is there any fear that the end of the box will suffer from it, as sufficient water will be found between the box and the pipe, to quench the heat and prevent ignition. The box may be about six feet long, three or four feet broad, and two feet deep.

Now, as I find that our friend Henry Chorley, of Scott farm, grows his corn-stalks so large, that he cannot find a box with knives sufficiently strong to cut them before steaming, I would recommend him to reverse the order of procedure; put up a couple of these box boilers, cook his corn-stalks *first*, and cut them *after*; and I think I might promise him double the benefit he now derives from the use of his steaming apparatus. By these means he would provide a vast quantity of capital swill for his dairy cows; for I would propose, that the liquor in which the stalks are boiled, should be let off from the boxes every time they are used, and be preserved for the purpose in a cistern; and this is to be done before the stalks are removed, preparatory to the reception of another batch of them. And if in the water there be mixed a few pounds of molasses, and as soon as it boils, a few pounds of corn and cob meal—first mixed with a little cold water—by way of thickening—not a particle of either being lost during the cooking by evaporation, a *porridge* would be formed, the best and cheapest food that could be devised for dairy cattle, calculated to produce an extraordinary flow of the sweetest milk. And no business could be more conveniently performed; it would only be for the boy to cut off with a sharp hook the top of each corn-stalk, which would form capital dry feed for the cows; place the stalks in the box straight and close, so as to make it contain as many as possible; put on the cover and light the fire; and while these are boiling, he may be unloading the other boiler and fresh packing it, preparatory to another cooking.

It has been said, that food when slightly acidulated, is best for cattle of every description—here then, will be an opportunity of fermenting the swill to any degree required; it is only to add a little yeast to the contents of the cistern, when reduced to a proper degree of temperature. Or if it be thought preferable to prevent fermentation altogether, it is but to sprinkle a little dust of lime and stir it up.—See an article on the antiseptic properties of lime, page 29, of the sixth volume of the Cabinet. J. C.

Bucks co.

The Silk Culture.—We copy the following paragraph, says the American Farmer, with unmingled feelings of pleasure, because we believe that the success of the experiment detailed therein, will exert a wholesome influence in favour of this branch of industry.

"*The Silk Culture.*—At a recent Agricultural show and fair in Fredericksburg, Mr. Rees Jewry, of Culpepper county, exhibited a specimen of silk fabrics manufactured by his daughters, who also superintended the cultivation of the silk.

"The articles produced from rather less than 10 bushels of cocoons, were as follow:

12 Yds. of cloth (from floss silk) value	$7
18 Handkerchiefs—sold for	81
8 Reticules,	16
4 Purses,	2
1 Shawl and 1 veil, valued at	10
Total,	$116

"Mr. Jewry has on his farm a plantation of mulberry trees, which is managed by his daughters, and he gives it as his opinion, that the proceeds of his cocoonery will amount, when in full operation, to more than his entire crops of wheat and corn. His establishment is capable of producing annually, 80 to 100 bushels of cocoons. This is decidedly encouraging to the silk enterprize."

From the Cultivator.

Peach Trees.

Many old men, not in the habit of committing their thoughts to writing, are possessed of much useful knowledge, which should be gathered up and recorded by their juniors. My grandfather, Ralph Voorhees, of this town, has long been a most successful cultivator of peach and plum trees; and from information derived from him, I select for publication a few hints, together with some particulars obtained from other sources.

Peach stones should be buried in the fall, in dry ground; cover them slightly; freezing is no injury. In the spring dig them up, crack them, but leave the pits within the shells, as this is most according to nature, and so plant them. If the stones are not cracked when planted, they may not vegetate until the second year; and indeed, my informant has known them in one instance, to lie half a dozen years before coming up.

July, though a good time for inoculating plum trees, is too early for the peach. If peach trees are inoculated in this month, every rain causes the wound to send forth a quantity of gum, which becomes hard, and is hurtful to the buds. This evil will be diminished, if the operation is deferred until August, or what is still better, the early part of September. Set the buds on the north side of the tree; the sun will not be so likely to dry them up. Mr. Voorhees still adheres to the old notion, that the bark separates more readily from the wood at the full moon, and that this, consequently, is the best time for inoculation. Apricot buds may be set on plum trees with success. Such a tree, inoculated about ten years since, is now standing in this vicinity, and is still in thrifty condition. Last year it was loaded with apricots, which sold here in the country, at the rate of four dollars per bushel.

Peach trees, in this region, are much infested by ants. These insects gnaw the bark, producing a flow of gum; they also gather upon the leaves, cause them to curl up, and turn yellow, thereby hurting the growth of the tree. I should like to hear whether the same plague exists elsewhere.

Urine thrown frequently around the bodies and roots of the trees, is a powerful stimulant to their growth, and preserves them in a great measure from the worm. Mr. Voorhees treated his trees in this manner last year; and among the whole number, consisting of about fifty, but one worm was detected during the season; nor were the ants so troublesome as formerly. Some persons cover the base of the tree with tar, and no doubt it is serviceable against both worms and ants. I believe the ravages of the worm may be prevented in a variety of ways, without resorting to the plan recommended in recent papers, of setting vermifuge plants, as tansy or wormwood, around the trees. It is worthy of inquiry, whether wormwood used for this purpose, would not be highly prejudicial to the growth of the tree, as this plant is noted for its power of draining the soil of its potash, an ingredient exceedingly useful to fertility. It is better to keep the earth for some distance around the trunk, clear of weeds, grass, and all living plants; and when young trees are set out, the ground should be kept under cultivation several years afterwards; for which purpose, one of the crops best adapted, is potatoes. A. R. McCord.

La Grange, Dutchess co., N. Y.,
Feb. 1st, 1843.

Education.

It seems to be universally conceded, that as scholars advance in years, they can apply their minds for a longer period to a specific subject. Little children are incapable of long continued application to the same thing. Their attention flits from point to point. As their hand seizes quickly upon an object, and as quickly loosens its grasp,—as their feet bound from the earth as soon as it is touched,—so their minds catch single glimpses of one subject, and with the volatility of a humming bird, fly to another. The whole organization—mind, brain, and limb,—vibrates to the pulsations of the heart, which are rapid, but weak. But with the advance of time, and with the repetitions of exercise, the power of concentration strengthens. As the mind becomes more mature, it pursues its investigations longer at once, and with a speed accelerated in the ratio of the time. It seems to perceive, almost intuitively, that it would lose momentum and headway by an interruption of the continuity of thought; and, therefore, it adheres to the same train of ideas more tenaciously, and for a longer period. Yet, notwithstanding the obviousness of these principles, it is a general fact, in regard to all our schools, that the younger scholars have far less variety and change in their exercises than the older. A monotonous course is enforced upon the young mind while it is quick and volatile; but as its power of concentrating itself upon any given subject increases, it is subjected to the dispersive influence of rapid changes. It must be a great reformation which will remedy this defect in our schools, and it is one imperatively called for.—*Com. School Journal.*

Lancaster County Lime, &c.

We have at length experienced in reality, the enjoyment which had been anticipated in a visit to our agricultural friends in Lancaster county, to its fullest extent; but it would be difficult to describe the magnificent establishments in that English county, as it has been termed, or the hospitality of their noble possessors. With a soil teeming with fruitfulness, and a general appearance of ease and competency amongst its cultivators, the valley of the Pequea may be considered the garden of that highly favoured district of country, "beautiful to look upon." A sojourn at "Prospect Hill" and "Spring Lawn," has abundantly testified to the truth of this position, and many will be the occasions of turning to it for reflection and comment, in our future labours.

But all other observations have been absorbed, as it were, for the moment, in the striking fact, that the present unexampled fertility, in reality as well as in appearance, is to be attributed in a great measure, to the free use of lime; and of lime too, that is highly charged with magnesia! without a single instance of its having produced the slightest deleterious effect, even when applied to an unlimited extent; its operations being only good, and that continually. We say to an *unlimited* extent, and we speak advisedly; for on part of an old meadow, divided only by a rail fence, the owner, W. P. Kinser, Esq., applied lime on the sod at the rate of 500 bushels per acre; and the result has been, a far superior growth of grass, both in quantity and quality, compared with the other part of the field; although that has been heavily dressed with stable-yard manure; while on several large heaps of effete lime that have been deposited near the kilns, green grass and clover are vigorously forcing their way through a covering of lime, two and three inches in thickness; which quantity may be safely calculated at about 2000 bushels per acre. This lime is burnt by Mr. Kinser, from a rock immediately adjoining his house; and he showed us a fence-row, where he had spread lime at the rate of 600 to 1000 bushels per acre, to destroy the Canada thistle; with what probable success may be calculated upon, from the fact that the grass and clover on that spot are far more luxuriant than on the land adjoining, although the lime lies in many parts more than an inch in thickness.

We were once largely engaged in Wales, England, in burning lime for agricultural purposes, from a black marble rock, which exhibited, on analysis, 98 per cent. of carbonate of lime, and were accustomed to spread it on primitive grass sod, to the amount of 500 to 1000 bushels per acre; from which, however, vegetation would spring up as from a dressing of dung —this effect always being attributed to the purity of the lime. Thus the face of that part of the country has been completely changed; yielding at the present time, white clover and the fine grasses indigenous to a limestone soil, in the greatest luxuriance; but we are prepared to say and to show, that never did we witness more beneficial results, with a more perfect absence of all deleterious quality in the Welsh lime, than in that which is furnished from the inexhaustible bed of stone, immediately adjoining the house at Spring Lawn, where three large kilns are now in full operation: and from all inquiry and observation, it would appear, that in every instance the most beneficial results have followed its application; no one ever entertaining an idea that any, even the most partial evil, can possibly arise from its use, to any extent; although, as has been said, it is known to contain magnesia in considerable proportion—how large, perhaps Mr. Kinser will be pleased to inform our readers.

Here then, is fresh ground broken for our friends, magnesian as well as anti-magnesian! It is no longer necessary for the former to urge restraint in its use, with the view to prevent injury; and to endeavour to show, that "a small quantity of magnesian lime is equal in its fertilizing effects to a larger proportion of that which is pure," and "presuming that the injury complained of, might arise from the poverty of the soil," &c.; they may now send the "question begging," and point to the Pequea lime, with all its magnesian impurity, as a *fertilizer*, when applied to all soils, and to the most unlimited extent. But since it is quite as certain, that other lime, containing, perhaps a less proportion of magnesia, has been productive of the most seriously evil effects in other parts of the country—of which too, we ourself have been witness—there will still be ample space for examination of the subject in our pages, with the view to discover, if possible, whether, after all that has been said, the evil is not inherent in the soil on which the lime has been applied, and not in the lime itself, magnesian although it might be. In short, whether there may not be a substance, or a *circumstance* if you will, contained in the soil, which the application of magnesia may render deleterious. The most satisfactory experiment would be, to dress one half a field with other lime, known to possess injurious qualities, noting its quantity of magnesia, and the other half with Spring Lawn lime, noting its proportion of magnesia also; using both in excess, say at the rate of 500 bushels per acre. In our estimation, the man who would undertake such an experiment, would *deserve* a *golden plough* and the gratitude of the agricultural community; and yet, how easily might it be accomplished by a few enlightened friends conveniently situated in both districts! We fancy that we see our excellent and intelligent friend, Mr. Kinser, at the head of such a patriotic band of citizens, and already employed in the enviable task! With his broad-wheel wagon of 100 bushels, and his magnificent team of horses, he could soon accomplish his share of the labour.

J. Pedder.

April 27th, 1843.

P. S. At p. 142, vol. 2, of the Cabinet, is the following observation by Mr. Daniel Buckley, of Salisbury, the person mentioned by Mr. Van Leer, as having spread plaster with a shovel, at the rate of 25 or 30 bushels per acre. As in all probability the lime he speaks of was obtained from the quarries now used by Mr. Kinser, they being within sight, the testimony borne to its perfectly harmless character when used largely, comes well in place for corroboration. He says, "there are good farmers who differ as to the quantity of lime that is most profitably applied; some say 60 bushels per acre, some 70, and some more. I have applied 100 bushels on an acre of limestone land at a dressing, but have not been able to discover any benefit in using it thus freely, *nor any injury*, except in the loss of the lime."

Dead Animals.—By covering dead animals with five or six times their bulk of fresh soil, mixed with one part lime, and suffering them to remain, their decomposition would impregnate the earth with soluble matter, so as to render it a most valuable manure, which might be applied in the same way as other manures to crops.—*Davy.*

It is recommended not to allow the lime to come in contact with the carcass, else the decomposition would be retarded. The lime may be spread over the surface of the heap of earth, where it would imbibe the gasses as they evolved during the decomposition of the dead animal; that having ceased, then the whole mass may be turned over together; and after a season, the compost may be carried abroad as a dressing of superlative value. It is said, in France the value of a dead horse is oftentimes far greater than that of a living one.

For the Farmers' Cabinet.

Fencing.

Messrs. Editors,—Believing that few matters are of more importance to the community—whether farmers or others—than the economy of "Fencing," I was exceedingly pleased with the suggestions of your correspondent, the "Old Farmer, of Salem," in your last January number.

Upon inquiry, it appeared the half inch iron rod of four feet and a half in length, would weigh above three pounds—at least so said my steel-yards—and could not be procured in Baltimore, our most convenient market, at less than five cents per pound, making the cost of each bar from 15 to 17 cents, instead of seven, as stated by your correspondent.

This being a most material item in the cost of each panel, I must ask the favour of your correspondent, or of "J. P.," who says in your last February number, he has tried it, or any kind friend capable of giving the information, to tell us where such rod iron can be purchased at the price stated. My decided impression is, that if the iron can be purchased for seven cents, at a place from which it can be conveniently and cheaply transported, this species of fencing will be adopted to a considerable extent.

Allow me, while on the subject, to suggest whether a slight *clinch* or *rivet head* on the lower end of the bar, with a perforated piece of sheet iron or tin, in the nature of a *washer*, may not be the cheapest and best mode of arranging the rod. It will then lay flat upon a stone or other substance placed under it, and by a very little labour the rod may be prepared with this rivet head, before taken to the field. Chester.

Kent co., Md., March, 1843.

Upon inquiry, we learn that ⅜ or ½ inch iron rods may be obtained in this city, at about five dollars per cwt.—Ed.

To destroy thistles, fern and coltsfoot.—Having once a pasture field that seemed one entire bed of common thistles, and having occasion to carry manure across it to another field, I observed all the thistles completely killed wherever the carts went, I therefore set to and rolled the whole field with a cast-iron roller, once in the latter end of May, and twice in the beginning of June. The field has been free from thistles ever since. Fern and coltsfoot I have exterminated in the same way.—*London Horticultural Register, for August* 1831.

Let every man mind his own business, and then every man's business will be attended to.

For the Farmers' Cabinet.

Thorough Culture of the Soil.

It has been said, that out of thirty seeds that ought to start soon after the time of sowing, not more than one will be found at the time of harvest. Now, although this statement might be considered as exaggerated, yet to a careful observer, the real matter of fact will be astounding. Many have been the opinions of agriculturists on this all-important subject, and the extreme paucity of plants on the ground, that is often witnessed in early spring after a severe winter, would lead one to believe that the general opinion, namely, that the killing out of the crop has been occasioned by the unkindly state of the winter weather, is correct; but in that invaluable little work, "Bland's Principles of Agriculture," a flood of light is thrown open to us, by which I believe the evil will be perceived to arise, in a very great measure indeed, from a far different cause—a cause that has hitherto been overlooked by almost every one. On his chapter "Of sowing seeds," he makes the following observations, which I beg you to record in the pages of the Cabinet, for future reference.

"The principles to be attended to, are, that the seed, of whatever description, should have the soil made sufficiently close, yet tender, about it, to prevent any circulation of fresh air, beyond what the effects of vegetation may occasion; for if it lie so close as to establish a complete exclusion of all fresh air, which always ensues on land that kneads on treading—a *stand-still* is the consequence. But on the other hand, should the soil lie loose about the grains or seeds, the proportion of air proves too great for decomposition, when dryness is favoured; and from this other extreme, vegetation continues dormant until some genial closing showers fall; when, perhaps by chance, vegetation may go on healthily; but it is too apt to cease afterwards, in part or altogether; and this is one cause of the thinning of our crops. The soil, in fact, must be close enough to retain its air and moisture in immediate contact with the grains, or they cannot be healthily decomposed for the benefit of the seed, and which process must necessarily take some time; but when any part is accomplished, the disengaged and rejected portions should be able to escape, to make way for fresh particles, which interchange is, as before stated, materially promoted by every subsequent shower.

"Now we see, on looking over fallow land, not dressed down with the harrow after ploughing, how few seedling weeds are to be found springing up; and this is, principally, from the cause above given; but when this fallow land is closed by repeated harrowings and rollings, even if no rain follow, germination commences; thus pointing out, most clearly, the propriety of adequate attention being paid to tillage *before*, as well as *after* the grain is committed to the ground; with the prudence of deferring, for a few days, the sowing and finishing of that field, which should plough up too wet to bear the process of pulverization immediately. The kneading of the land, which so frequently occurs at the season of wheat sowing, is removed, and the ill effects counteracted by the winter's frost; but it must be borne in mind, that the smaller the seed and the later and drier the time when sown, the finer ought to be the tilth; and the turnip is an instance.

"If we examine a few facts of vegetation, we shall find them as follow:—Grain, in a wet harvest, and when tied in the sheaf, is first detected growing or spearing, about the band; next, amongst the ears where collapsed together; and the evil is remedied by simply loosening the one, and separating or spreading open with the hands the other, to admit of a circulation of air, which arrests all farther vegetation, till more rain falls to closely reunite them again; and the same follows with mown wheat or barley, when the ears are permitted to remain in contact with the ground, during a series of warm showers; but lightly lifting them up and letting them fall again, or turning them over, effectually preserves the crop, if it be done and repeated in time. And here follow cases analogous to the above—boards or timber, when fresh sawn out and put close together, will soon generate the dry rot, if pieces of wood or other substance, are not placed between each board or piece of timber, of sufficient thickness to admit a free circulation of air. Damp paper and damp linen also, will exhibit marks of the same evil as those boards, and if long neglected, they will be completely destroyed; as the air, being retained, is decomposed; when the destructive or vegetating process commences; and like a fire it burns."

The author's observation, that weeds do not grow so plentifully on fallowed land until it has been dressed down with the harrow, &c., is worthy our most serious consideration, and forms an argument for the new husbandry over the old—the difference between them being this, that the *old* system went upon the plan of preventing the weeds from growing; the *new*, of encouraging them to grow, that they might be turned down and destroyed by the plough—which is far above all price; for it puts into our power the means of completely ridding our crop of weeds, it being only to plough and harrow for them when no crop is on the ground; and if we could be brought to consider that a weed half an inch in height, is as much a *weed* as is one of half a dozen feet in height, and that the eradication of the one is equal in importance to that of the other, the labour of keeping our crops clean would not be a tenth part so great as now. On remarking to a friend the other day, that his last year's corn land was particularly clean, he replied, "my corn land is always clean; for so soon as I can see the weeds, I am at them, and never allow them time to grow to great ones; if I did, 'twould be all over with me; one or the other of us must be master, and I find it but very little labour to destroy the weeds, if I take them in time —a weed is a weed you know, small as well as great." And Mr. Paschall Morris, in his Address before the West Chester Agricultural Society, has given us practical assurance of the fact, that land which has been exhausted of weeds by repeated ploughing and harrowing, before sowing the seed of the beet, turnip, &c., can be afterwards cultivated with far less labour and cost—"a fact worth knowing," and one which we ought at once to put into practice. I am convinced that we do not plough and cultivate our land sufficiently, and that it has been neglected under a false idea, that by over-ploughing we shall impoverish our soils —an egregious error, and one which I am now combating, by cutting across my corn-tilth, which was broken up in the autumn, the turf coming up decomposed, in consequence of its having been totally buried, by being turned completely over by the Prouty or centre-draught plough; for the knowledge of which, and for many other things, I am indebted to the Farmers' Cabinet.

James Godwin.

Schuylkill co., March 14th, 1843.

From the Farmer's Monthly Visitor.

Economy for Farmers.

There are many points of economy which in the course of a single year, much less in the ordinary life of a farmer, would make a very great difference. A difference between dependence and independence, wealth and poverty—the having of a very little farm for each of the boys and girls, or nothing at all. Our superfluities cost us more than our wants, and it is not economy to forego the necessities, the comforts and conveniences of life, for these are all consistent with true economy. And indeed we generally find, that those who attend to true economy, have all the essentials of life about them.

Economy is not found in deprivation, but in sufficiency. Be generous to the land: it will not yield without manure, and this will produce an abundant crop; and this feeds the family well and clothes well. One well fed horse is worth any number of scare-crows, and is more creditable. A place for every thing and every thing in its place, is economy in time and labour. Not less so, is to have all the tools, of the kind best adapted to their use, and always in order. A few minutes spent in grinding the axe in the morning, is well paid for before sun-set. One well fed, well sheltered cow, will give more milk than half a dozen starved ones. The calf is worth more; more butter is made; the milk is of a healthier quality, the children are healthier, and the doctor is not called in.

Liberality to the land is not less essential than it is to the labourer. By it we procure the best workmen, and they are the most profitable to their employers. Like the soil, if well fed and well paid, they are able and bring about more: this also is economy: for a strong man, like a strong and willing team, gets up the hill, when the weak and disheartened stop at the bottom. Liberality sustains, and promotes fore-cast. Take time by the fore-lock, says the adage. Have plenty of seasoned wood prepared; keep the windows whole: this keeps the house warm, the family healthy. the wife good natured. She anticipates her duties, and has time to spend a cheerful evening, knitting in hand.

Do one thing at a time, and once well done, is twice done; this also is economy; and good materials for clothing, well made up, are also the cheapest in the long run. If our farmers would attend to these things, and others that their good sense will suggest, they need not think of going to the far West or South, to seek for bettering their conditions. Our lands are capable of producing far more than they ever have done, and our population and comforts would correspond. We need not look to the monotonous, unhealthy, debilitating, and frequently demoralizing factories for employment; there is yet ample room, and what we cannot buy, we can make for ourselves. Let us then attend to these things; keep our sons and daughters at home or near us. Then with the blessing of Heaven we shall prosper, and at our annual thanksgiving, see our board and fire-side encircled with kindred blood and happy faces. A Farmer.

The Steam Plough.

The following account of Heathcoat's steam plough, we take from Chambers' Edinburgh Journal, October 7th, 1837, which credits it to the Mark Lane Express. We do not apprehend it will soon come into general use in this country.—Ed.

The plough has but a distant resemblance to that in common use: it is double, that is to say, has two sets of stilts, one set at each end, and each set consists of two handles—it being occasionally found necessary to employ two men to guide the plough. It has, also, two shares, coulters, and mould-boards, together with all the peculiar apparatus applied to this plough; but it may be said to have no beam. The mould-boards are both on one side, set tail to tail, so that the plough acts to and from the machine, without turning round. This plough is most ingeniously constructed for performing the various functions required of it. By means of friction rollers, placed under each end, and which give motion to a crank (simply by the contact of the rollers with the ground,) two sets of apparatus are put in motion, that perform essential offices in the operation of ploughing moss. These are, first, a peculiar action given to a sharp-edged and crooked blade, which is made to traverse against the sharp steeled edge of the coulter, producing the operation of *clipping*, which effectually severs all the roots of the heath carices, and other strong rooted plants, that occur in the line of the cut made by the coulter. Secondly, a similar operation is simultaneously performed, and by the same impulse, with another set of similar instruments, acting under and against the edge of what forms the *share* of the plough; these last separate all the fibrous roots that occur in the sole of the furrow. The form of the mould-boards is such as to turn the furrow-slice completely over, and lay it neatly with the heath surface downwards. The auxiliary carriages move on lines parallel to the road-way of the principal machine—one being placed on each side, and at the proposed distance of 220 yards from the machine. The bands, each of 660 yards in length, pass out from each side of the principal machine, where the ends are secured to one of the machine pulleys, on the respective sides, extend to, and pass round the large pulley of the auxiliary, and return again to the machine. At this point, the plough is affixed to the band, while as much more of the band is coiled round the other machine pulley, respectively, as is equal in length to the distance between the machine and the auxiliaries. The steam engine being now set on, and the second branch of gearing adjusted to act upon the pulley to which the first end of the band is attached, this pulley will coil up the band, causing the plough to advance towards the auxiliary; and, at the same time, the other pulley, which at this time is free to uncoil, will deliver off its portion of the band. When the plough has reached the auxiliary, the motion is stopped; the plough is set to the next furrow, the action of the steam engine on the pulleys is changed, by shifting a clutch from the one to the other, and the pulleys reverse their duty; that which was uncoiling, now becoming the coiler, and so on alternately.

In commencing the reclamation of a bog, a road-way is first to be traced out, in a suitable direction for the proposed operations. This is done by simply forming two drains parallel to each other, and about seven yards apart. The principal machine is launched on this road-way (still retaining its natural surface.) The machine rests on the raw bog, and bears on so large a surface, that its buoyancy is insured. It also consolidates and dries the road-way by its pressure. The machine and auxiliaries remain stationary during the time occupied by the ploughs in taking one furrow; they are then severally put in motion, and made to advance in three parallel lines, in order to keep pace with the breadth of land turned over, and to pull the ploughs accurately straight. The machine is impelled by the engines, and each auxiliary by its attendant man, who also shifts his planks onward, as occasion requires. The machine and its auxiliaries have thus to be moved over a space of eighteen inches only, whilst the ploughs have each travelled 220 yards, and turned over 220 square yards of land, nine inches in depth; in other words, the machine and auxiliaries have only to be moved eleven yards, in the time that the ploughs have travelled five and a half miles, and turned over a statute acre of land. The ploughs perform their work at the rate of two miles an hour, and are subject to very few stoppages, so that eight acres and three quarters, nearly, of bog, would be ploughed up in a day's work of twelve hours; or, taking the average of daylight throughout the year, and making a liberal allowance for hindrances from weather, and other causes, one machine would plough up 2000 acres in a twelvemonth.

The principal machine, together with a six ton load of fuel, weighs about 30 tons; its superficial bearing on the moss is 390 square feet, giving a pressure of 178 pounds on each square foot. Taking the weight of a man at 168 pounds, and the area of his foot at 30 square inches, he would, in walking, press with a weight at the rate of 806 pounds per square foot, so that the machine has a buoyancy of about 4¾ times that of a man, and could, therefore, travel on much softer soil than red moss, which is considered very wet and spongy. The steam engines of the machine consist of two cylinders each, of 10 inches diameter, with a two-feet stroke, and the other appurtenances of a non-condensing engine, together with a fly-wheel, and, at a regular speed, make 60 strokes per minute. The machine is capable of travelling one inch for every stroke of the engine, or five feet per minute. This velocity is acquired with a pressure of steam equal to four pounds on the inch. The drain on either side of the road-way, supplies abundance of water for the boiler. The flat iron band by which the plough is dragged, is 2⅛ inches broad, and one-sixteenth inch in thickness. The friction of the band, together with the empty plough at the distance of 304 yards, is overcome with a pressure of steam equal to eight pounds on the inch; and when the plough has hold on the furrow-slice, a pressure of 13 pounds is required, making in all, 17 pounds pressure of steam on the piston of the engine, which, after deduction of two pounds for the friction arising from the piston itself, leaves a total effective pressure equal to 15 horses' power. This force is required to work one plough, moving at the rate of two miles per hour, turning over a furrow-slice of 18 inches in breadth, by nine inches in depth. If two ploughs were employed, the force would require to be increased to a pressure of 25 pounds on the inch, equivalent to 25 horses' power, and the plough would turn over a surface of 8¾ imperial acres in 12 hours. The plough weighs 12¼ cwt., is 30 feet in length between the two extremities of the stilts, 10 feet in the length of the sole, which last has a bearing surface of 10 superficial feet, and leaves an open furrow of two feet in width. The consumption of coal required to perform the above operation, is from one and a half to two tons. according to quality, per day. The number of men required, would be as follows:—Two to conduct a plough, one to attend the movement of the auxiliary machine, and one to prepare the end of the furrow next to the machine for the entrance of the plough in the succeeding *bout*. The full complement of men, therefore, for two ploughs, or sets of harrows, &c., would be eight labourers, one engine man, and one boy to assist in the machine.

Honest industry may hope for success.

Results of Spade Husbandry.

At the last meeting of the Lytham Agricultural Society, Mr. Threlfall, of Hollowforth, furnished the following interesting calculations relative to labour performed by the spade and plough.

Mr. Threlfall stated, that he had for some years past turned his thoughts to the subject of giving employment to his poorer neighbours, and had made the experiment of spade labour for the production of oats and Swede turnips, and always found that it offered great advantages over work performed by the plough. He had this year repeated the experiment on two plots of land, each a statute acre, from which he had obtained the following results: from the acre dug by the spade, the production had been 87¾ bushels of oats, of 36lbs. per bushel; from the acre ploughed, the yield had only been 47½ bushels, of the same weight, showing a difference in favour of spade husbandry, to the extent of 40¼ bushels of oats, which were worth £5. Again, from the crop raised by spade labour, he had obtained 389 stones of straw, whereas, from that grown on the ploughed land, the weight was only 222, leaving 167 stones of straw in favour of the spade system. The cost of digging a statute acre, which he had had done between the months of November and March, was 37 shillings; for ploughing the like quantity, the charge would be but 10 shillings, which made a difference of 27 shillings in favour of the plough. He trusted, then, that the statement he had made, would prove so satisfactory as to induce some of those who heard him, to try the spade labour system, and thus be the happy means of increasing the healthful employment of the poor. By this plan they might dispense with the keeping of a portion of their present stock of horses, save the corn which those horses consumed, and possibly, in the end, do away with the necessity of having to send money out of the country to buy corn elsewhere.—*The British Farmer's Magazine.*

It is a great mistake to consider husbandry too narrow and mean an employment for a man of parts and education—is it possible to propose a nobler entertainment for the mind of man, than he would find in the inquiries he must make into the operations of nature? The subject is so vast that it can never be exhausted; for could he live for ages, he might still go forward in his researches, and still make fresh discoveries, that would excite afresh his admiration of the riches of Divine wisdom. Lisle.

Extraordinary Farm Produce.

A VALUED friend in London, has forwarded to us the British Farmer's Magazine, for "Jan. 1843." We take from it the following article, which it credits to the Northern Whig.—ED.

NOTWITHSTANDING all that has been said and written on agriculture in Ireland, and besides the many instances of successful practice in many parts of the country, comparatively little is yet known of the real fertility of the soil, and the great capabilities of this hitherto neglected part of the empire. The people know not the productive powers of their land; for in few instances has a farm been brought, by judicious cultivation, to the highest point of its production. Perhaps the most successful example of the capabilities of land, under proper management, in Ireland, and of the immense crops which can be raised, may be seen on the National Model Farm, under the Board of Education, at Glasnevin, near Dublin. This farm, strictly conducted on the improved system of green cropping and house feeding, contains 52 statute acres, and there are kept on it, during the year, 22 head of cattle and three horses. It supplies, on an average, ninety persons during the year, with farm produce, such as milk, butter, potatoes, and vegetables of various kinds; and furnishes the farming establishment with pork, besides a number of private families with the above articles. A considerable quantity of vegetables are carried to market, and all kinds of grain, which is abundant. There is at present a crop of oats upon the farm, the produce of 14½ British acres. It is secured in eight stacks, and is estimated by the best judges to be equal to the average produce of 50 acres. It stood perfectly close upon the ground, average 6 to 7½ feet in height, the head and ear corresponding; the other crops, potatoes, turnips, Italian rye-grass, &c., of like quality. The manager conducts the farm on his own account; pays £257 7s. 8d. per annum, of rent, besides other expenses, amounting in all, to upwards of £400 per year; and we are informed, and believe, that he realizes a very handsome annual sum from it besides. He labours and manages it almost exclusively by a number of boys, agricultural pupils, and teachers, who are there in training in the science and practice of agriculture. As a test of what land is capable of producing, when brought to its highest point, there are few examples so appropriate as we have in this particular instance; there are, perhaps, more crops raised, more cattle kept and fed, more human beings supplied with the common necessaries of life, more manure accumulated, more employment given, and, in fact, more *money made*, on this spot of land, than on any other farm of the same extent, (conducted on a proper scientific rotation of grain and green crop) in any part of the empire, *or the world*. Did the average land of Ireland produce only one half of the value, according to quantity that is on this model farm, we should hear no more of corn laws, tariffs, or want of employment amongst the people.—*Northern Whig.*

For the Farmers' Cabinet.

Woodlands.

PREVIOUS to the discovery of the inexhaustible mines of coal in the eastern section of Pennsylvania, or before the means for transporting produce to our markets with so much facility and cheapness, were employed, it seemed prudent to preserve large bodies of woodland, to support the immense drains caused by the demand for fuel; and had no substitute been found, the result would have justified such a policy. But no such inducement now exists, as the abundant supply of coal supersedes in a great measure, the use of wood for fuel; the price therefore, of wood, will not probably advance to any great extent.

The objections to keeping a larger supply of wood than may be necessary for home consumption, increase as we recede from market; where the expense of transportation bears a greater proportion to the amount of sale. Where there is a prospect of towns springing up in the neighbourhood, these objections become modified; yet it is a question whether the proceeds from tillage would not yield a greater profit than the uncertain one of a future demand. It is certain that many farmers in Chester and Delaware counties, would have been greatly benefited, had they destroyed large portions of their woods, *without any profit* and at *considerable expense*, twenty years ago, and brought the land into cultivation, instead of retaining it in an unproductive state to the present time. And it is probable the same remark may be made fifty years hence with equal truth. The influence of custom and preconceived impressions is so strong, that even imaginary self-interest will blindly dictate an adherence to former views of the subject, while doubts of the utility of change will operate to their preservation. It is true, there is a gradual diminution taking place, but it will take a long term of years to eradicate the superabundance of wood now on hand. It is not designed to enter into a minute calculation, to compare the benefits to be derived from the one course of procedure, with the losses sustained by the other. Every practical farmer may estimate for himself the value of his land for agricultural purposes, and its productiveness in propagating the growth of timber. The *use* of money vested in woodland, would generally be found to equal in value the worth of such property at the end of twenty years, without having, in the mean time, received any benefit from the latter.

It is probable the farmer would find it his interest, where convenient to markets of coal, and where the soil is good and ground tillable, not to retain even enough of firewood for home consumption; since the land necessary to supply such a demand, *ad infinitum*, might be rendered more profitable by cultivation, than it would be if left to supply timber for fuel. It may be to the farmer's interest to have a good supply of timber suitable for fencing, on his premises, to save the great expense of transportation from distant places where it may be grown cheaper; but four or five acres to the hundred, are quite sufficient for this purpose, if well set with chesnut and locust; and if not, they may easily be grown in nurseries like fruit trees, from the seed, and transplanted to those places best adapted to their reception. Both the locust and chesnut are very rapid in their growth, as well as durable. When cut in August or September, and made into good and substantial rails, it is said they will last at least fifty years, unless where coming in contact with the ground. Both these trees send up shoots in abundance, which supercede the necessity of replanting.

These observations are offered to the attention of the landholder, who aims at a profitable return for his investment; but if desirable to retain or improve the beauties of a landscape, at the sacrifice of some pecuniary advantage, it is suggested whether that object may not be as fully attained by reducing, in some measure, the present superabundance of wood, and in improving the appearance of the remainder.

Charles Painter.

Concord, March 28th, 1843.

A man cannot be engaged in the offices of husbandry, but many things will come under his observation, from which Divine, moral and philosophical conclusions are so natural and obvious, that to avoid them, he must shut his eyes against the light of the sun.

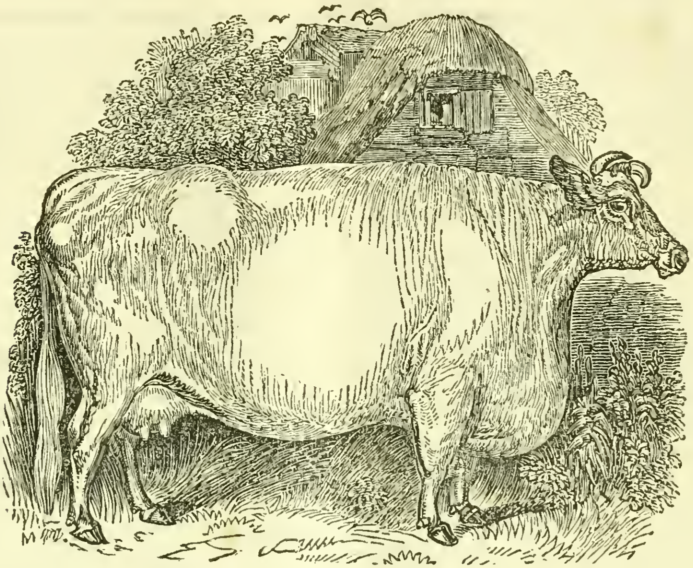
In marriage, prefer virtue before beauty, and the mind before wealth.

Birds on Farms and Orchards.

An extensive experiment has been made on the Continent, the result of which has been, the opinion that farmers do wrong in destroying crows, jays, &c., and the small birds on their farms, especially where there are orchards. That birds occasionally do mischief amongst ripe grain, there can be no doubt; but the harm they do in autumn, is amply compensated by the good they do in spring, by the havoc they make amongst the insect tribes. The quantity of grubs and bugs destroyed by crows, and of caterpillars and their grubs by the various small birds, must be annually immense. Other tribes of birds which feed on the wing, destroy millions of winged insects, which would otherwise infest the air and become insupportably troublesome; even those usually supposed to be mischievous in gardens, have actually been proved to be innocent, for on examination they have been found to destroy those buds only, which contained some destructive insect. On some very large farms, the proprietors determined a few years ago, to offer a reward for the heads of crows, but the issue proved destructive to their farms, for nearly the whole of their crops failed for three succeeding years, and they have since found it necessary to import birds to re-stock their farms! And of late years, the extensive destruction of the foliage and young fruit-trees in orchards, by a species of caterpillar, has excited the attention of the naturalist; and it has been found to have arisen from the habit of destroying those small birds about orchards, which, if they had been left unmolested, would have destroyed or kept down these destructive insects.

Every crow requires at least one pound of food a week, and nine-tenths of their food consist of worms, grubs and insects; one hundred crows then, in one season, destroy 4,780 pounds of worms, grubs, insects and larvæ; from this one fact, some slight idea may be formed of the usefulness of this much persecuted bird, the farmer's best friend: but a thousand more well-attested facts might be stated to show the value of birds to the farmer, if more were needed. Let then, every farmer, and every one who is interested in the labour of the farmer—and who is not? do what he can to protect them, and the face of the country will no longer present the appearance of a scorched and blasted wilderness, but will preserve its beauty to the eye, and the trees will produce their fruit in season.—*N. England Farmer.*

Let no man anticipate uncertain profits.



THE REV. N. BERRY'S COW, OF THE "ALLOY" BREED.

Mr. Colling, during his career as a breeder, tried several experiments in crossing, considering it desirable to reduce the size of the Short-horns of that day, a portrait of one of which appears in the Cabinet, vol. 5, page 345, as Patriot: and the cross with the polled Galloway, produced the most successful results; being calculated by their deep, massive frames and short legs, to bring the Short-horns nearer the ground, and to dipose their weight in a more compact manner; their hardy habits being essentially useful, and the quality of flesh and hair was such as to render the experiment safe. And although at the time, the event was regarded with ridicule by the pure-blood advocates, Mr. Colling persisted, determined to take one cross only, and then breed back to the Short-horn; the only way in which crossing can be successfully adopted: to breed from the produce of a cross directly among themselves, leading to results which have induced many persons to determine conclusively against all crossing: but to take one cross, and then return and adhere to one breed, will be found to *stamp* a variety with sufficient certainty. Mr. Colling's pure Short-horn bull, Bolingbroke, was therefore put to a beautiful red polled Galloway cow, and the produce, a bull-calf, was in due time put to Johanna, a pure Short-horn—she also produced a bull-calf; and this grandson of Bolingbroke, was the sire of the cow "Lady," by another pure Short-horn dam; and from "Lady" has sprung the highly valuable family of improved Short-horns, which has been termed in reproach, the *Alloy*. The dam of "Lady," was also the dam of the bull Favourite; and as the grandson of Bolingbroke is not known as having been the sire of any other remarkably good animal, it is probable that the unquestionable merit of "Lady" and her descendants, is to be attributed more to her dam than to her sire—a volume in proof of the true axiom in breeding—*Dam the best.* The prejudice against this cross was at its highest at the time of Mr. C. Colling's sale of stock, and yet, under these circumstances what said public opinion, unequivocally certified by the stroke of the auctioneer's hammer? "Lady," at 14 years old, sold for 206 guineas; "Countess," her daughter, nine years old, for 400 guineas; "Laura," another daughter, four years old, for 210 guineas; "Major" and "George," two of her sons, the former three years old, the latter a calf, for 200 guineas the former, and 130 guineas the latter: besides a number of others more remotely descended; all at high prices—a sale of 48 lots, realizing the sum of £7115 17s. sterling: "Lady" and her descendants, bringing larger sums than any other family; this sale settling the public judgment and taste.

As a specimen of the Alloy, the above portrait of Mr. Berry's cow was taken three days before she calved, and exhibits her usual condition. She gave a moderate quantity of particularly rich milk, which was all that could be expected.

The Turnip Culture.

"No person ever deserved better of his country, than he who first cultivated the turnip."—Lord Kames.

The introduction of the turnip amongst the cultivated crops, constitutes an era in the art of husbandry. Of the several varieties, three may be selected as most worthy of attention; they are the yellow, the white, and the ruta-baga.

1st. Ruta-baga or Swedish turnip, is the most important of these varieties, and yields the largest quantity of vegetable matter for the use of farm-stock; it should be remarked also, that there are varieties of this root, the best having a yellow colour, globular form, and no neck or stem. The seed should be black and full; one pound being sufficient for an acre, half that quantity producing plants enough, but as the seed is liable to fail, a pound is not too much to insure a crop; the time for sowing being from the 20th of June to the middle of July; the soil best adapted for their cultivation, being a light, dry and friable loam, or almost any dry soil, with the exception of strong and heavy clays. The land is best prepared by throwing it into drills with the plough, in which compost or short manure may be placed and covered with a bout of the plough, forming a ridge, upon the top of which the seed might be drilled. The ruta-baga flourishes well on a clover lay, which may be broken up after the first crop of hay is carried; the plants making their appearance in a few days, if the season be favourable; the cleaning being performed by means of a cultivator; the thinning of the plants being done by hand, to the distance of eight or ten inches in the rows. The quality of this crop depends upon the size, and what is remarkable, the largest roots possess the most nutriment. The value of the crop is very variously estimated, the product being on an average, on good land, 600 bushels per acre, the profits being sometimes estimated as high as 80 dollars per acre, their value varying in different seasons and places. It is one of the most valuable crops raised by the farmer, although they are less esteemed than formerly; still they are excellent food for all kinds of cattle, sheep and horses, and produce large quantities of the best manure.

2. The white turnip requires the same soil and treatment, and the sowing may be delayed for a longer time. It is not so nutritious as the preceding, but is still excellent as a second crop, and for cattle feed in the fall of the year, by which course light soils may be improved. The Tankard variety of white turnips, often yields an enormous crop, and is closer in its texture than the Norfolk white.

3. The yellow varieties may be sown about the 15th of July, and are richer than the whites, although inferior to the ruta-baga. Sinclair estimates the amount of nourishment in 64 drachms, as follows:

	grains.
White Tankard,	76
Common White loaf,	80
Norfolk White,	73
Store or Garden turnip,	85
Ruta-baga,	110

This table shows the superiority of the ruta-baga over all the other varieties; it yields about six or seven per cent. of its whole weight of nutritive matter, while the white varieties afford but four per cent., and in the largest roots, only three and a half per cent. of their whole weight; hence one acre of ruta-bagas, is equal to one and a half acre of the whites.—*Gray's Practical Agriculture.*

If every one would content himself with cultivating no more land with an exhausting crop than he could well manage; if he would never plant with the view of taking more of the original stamina from the land in the present crop, than he communicates to it, we should see less of what is called *poor land;* for we are inclined to believe that there is much less difference in the quality of land, than in the management of it. Strong land with a hard pan, yields more when it is first cleaned, and will last longer than light land; but when both are reduced by exhausting crops, it is generally conceded that the lighter land for many purposes, is more valuable than the heavier: by pursuing a regular rotation of crops with effectual manuring, it is thought the lighter land will give most profit, and that the crops, through the extremes of drought and wet, will be most sure.—*Farmer's Visitor.*

"I HAVE NO INFLUENCE."

What if the little rain should say,
So small a drop as I
Can ne'er refresh those thirsty fields—
I'll tarry in the sky!

What if a shining beam of noon
Should in it's fountain stay,
Because its feeble light alone
Cannot create a day?

Doth not each rain drop help to form
The soul-refreshing shower,
And every ray of light to warm
And beautify the flower?

Beautiful Eulogium on a Wife.

The celebrated Sir James Mackintosh, the well-known English historian, who proves himself in this instance, to have been no less a chronicler of the heart's best affections than a writer of political facts, in a letter to one of his learned friends, presents the following beautiful delineation of the character of his deceased wife—a woman, who, from her husband's representation, must have been such a one as the poet Wordsworth described, when he wrote of

"A perfect woman, nobly planned,
To warn, to comfort and command;
And yet a spirit, still and bright,
With something of an angel light."

"Allow me, in justice to her memory," writes Sir James, "to tell you what she was, and what I owed her. I was guided in my choice only by the blind affection of my youth, and might have formed a connection in which a short-lived passion would have been followed by repentance and disgust; but I found an intelligent companion, a tender friend, a prudent monitress, the most faithful wife, and as dear a mother as ever children had the misfortune to lose. Had I married a woman who was easy or giddy enough to be infected by my imprudence, or who had rudely attempted to correct it, I should in either case, have been irretrievably ruined; a fortune in either case, would, with my habits, have been only a shorter cut to destruction. But I met a woman who, by the tender management of my weaknesses, gradually corrected the most pernicious of them, and rescued me from the dominion of a degrading and ruinous vice.

"She became prudent from affection; and though of the most generous nature, she was taught economy and frugality by her love for me.

"During the most critical period of my life, she preserved order in my affairs, from the cares of which she relieved me; she gently reclaimed me from dissipation; she propped my irresolute nature; she urged my indolence to all the exertions which have been useful and creditable to me, and she was perpetually at hand to admonish my heedlessness and improvidence. To her I owe that I am not a ruined outcast; to her whatever I shall be. In her solicitude for my interests, she never for a moment forgot my feelings and my character. Even in her occasional resentment—for which, I but too often gave just cause (would to Heaven that I could recall those moments!) she had no sullenness or acrimony. Her feelings were warm and impetuous; but she was placable, tender and constant. She united the most tender prudence with the most generous and guileless nature, with a spirit that disdained the shadow of meanness, and with the kindest and most honest heart.

"Such was she whom I have lost; and I have lost her when her excellent natural sense was rapidly improving, after eight years of struggle and distress had bound us fast together, and moulded our tempers to each other; when a knowledge of her worth had refined my youthful love into friendship, before age had deprived it of much of its original ardor. I lost her, alas! (the choice of my youth, and the partner of my misfortunes) at a moment when I had the prospect of her sharing my better days. To expect that any thing on this side of the grave can make it up, would be a vain and delusive expectation. If I had lost the giddy and thoughtless companion of prosperity, the world could easily repair the loss; but I have lost the faithful and tender partner of my misfortunes; and my only consolation is in that Being under whose severe and paternal chastisement I am cut down to the ground."—*Evening Transcript.*

Crows.

Wilson, in his American Ornithology, says that crows have been employed to catch crows, by the following stratagem:—A live crow is pinned by the wings down to the ground, on his back, by means of two sharp forked sticks. Thus situated, his cries are loud and incessant, particularly if any other crows are in view. These sweeping down about him, are instantly grappled, and held fast by the prostrate prisoner, with the same instinctive impulse that urges a drowning person to grasp at every thing within his reach. The game being disengaged from his clutches, the trap is again ready for another experiment; and by pinning down each captive successively, as soon as taken, in a short time you will probably have a large flock screaming above you, in concert with the outrageous prisoners below.*

The same author mentions an agreeable instance of attachment in a crow. "A gentleman who resided on the Delaware a few miles below Easton, had reared a crow, with whose tricks and society he used frequently to amuse himself. This crow lived long in the family, but at length disappeared, having, as was then supposed, been shot by some vagrant gunner, or destroyed by accident. About eleven months after this, as the gentleman one morning, in company with several others, was standing on the river shore, a number of crows happening to pass by, one of them left the flock, and flying directly towards the company, alighted on the gentleman's shoulder, and began to gabble away with great volubility, as one long absent friend naturally enough does, on meeting another. On recovering from his surprise, the gentleman instantly recognised his old acquaintance, and endeavoured, by several civil, but sly manœuvres, to lay hold of him: but the crow, not altogether relishing quite so much familiarity, having now had a taste of the sweets of liberty, cautiously eluded all his attempts; and suddenly glancing his eye on his distant companions, mounted in the air after them, soon overtook and mingled with them, and was never afterwards seen to return."—*Jesse's Gleanings.*

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* This method of catching crows is, I believe, practised in some parts of England to catch jays, who make a most violent outcry when pinned to the ground.

The above anecdote reminds us of a little incident recently mentioned by a friend, who in his travels in the summer of 1832, stopped for the night at a public house in Bucks county, and was much amused by the motions of an active, voluble and intelligent crow, who vigilantly superintended the business of the hostler. He first leaped into the carriage, apparently to give directions about the baggage. The hostler, either intentionally, or accidentally, left a part of it behind, but the crow, on discovering it, was excessively restive and vociferous until it was all removed. He then followed the horses to the shed where they were hitched, in order to be properly groomed. He walked round and round them, examining their heels while the hostler was cleaning them, and wherever a speck of mud was observed that should be removed, his boisterous gabbling gave the servant no rest, till it was attended to. When every thing was done to please him, he strutted off with all the consequence of a gentleman who felt that his orders were law. Mine host himself, could hardly have shown more interest in the baggage and the horses, than did his jet-black crow-ship.—Ed.

For the Farmers' Cabinet.

Cut-worm,--Clover,--Lime.

I have been making some observations respecting the cut-worm since my last communication, and I think the whole round of its existence may be traced in the following manner: First; a minute insect emerging from an egg. This small creature continues to grow several weeks, consuming green food indiscriminately, until full size and mature age are attained. It then crawls into the ground, to the depth of three or four inches, and prepares to undergo a change—begins to draw up, shorten, and gradually receive a hard shell. This apparently torpid state continues about one month; the shell then opens and lets out a fly, much resembling a common candle fly; and judging from every thing else of a similar nature, this fly lays the foundation for a new crop of little worms.

So much to prove that cattle have no agency in the production of cut-worms; they being in every stage, totally unfit to encounter the difficulties belonging to the trade of a *tumble bug*. As still further proof—I once mowed a part of a field and left the other part without mowing or pasturing. Next spring, the corn growing on the part on which the grass was left, was nearly all cut off by the worms. The corn on the mowed part was not injured at all; both ploughed in the spring, and at about the same time.

A correspondent, X., through the Cabinet, sixth vol., page 208, inquired how to preserve clover best through the winter. From my own experience I am confirmed in the belief, that clover should not be pastured;—the surface of the earth should be kept as light and dry as possible, and if the subsoil is a stiff clay, so much the better. If the surface is rendered compact by treading, it unites firmly to the top of the clover roots, at the commencement of frost; and as freezing advances, the surface of the earth rises, taking the clover with it, even defying the strength of the tap-root, fastened in the clay beneath. The earth settles every thaw, and takes lower hold on the root every freeze. I have seen, in wet places, young apple trees with tap-roots two feet long, pulled entirely out of the ground by a winter's frost. Should the surface be light and dry, it will not adhere so firmly to the root by freezing; the earth may rise around, and leave the plant undisturbed.

I was much pleased with an article in a late number of the Cabinet, on the use of lime, from the pen of I. W. Vanleer; and so far as my farm is concerned, I cordially endorse his doctrine; however, this is a limestone country, and every farmer may make his own lime if he will. I have used lime in various ways, and I think the trowel applies it better than anything else. If it is applied to land, the further it is hauled, in a general way, the more good it does.

Micajah T. Johnson.

Short-creek, Harrison co., Ohio, 1843.

For the Farmers' Cabinet.

Lime as a Manure.

I was a few days ago engaged in reading an agricultural periodical of some celebrity, and was rather surprised at the great variety of opinions made public through its pages, on the subject of lime as a manure. I have for some years believed that its action is as I shall hereafter describe it; and whilst I offer no objection to the views of others, and do not propose to enter into any controversy in favour of my own, I indulge a hope that when I add another to the numerous opinons on the subject, it will not be found to be the least worthy of belief, or most at variance with practical results.

It is understood to be one of the laws of nature, that when the principle of life has ceased to exist in organized matter, animal or vegetable, chemical action, till then suspended by the power of life, resumes its sway, the various parts of the organized lifeless body, are acted upon by light, heat, air and moisture; decomposition takes place, and a large part of the substance in various combinations, passes into the air in the gaseous form—of the carbon so passing off, either as carbonic acid gas, or carburetted hydrogen, the atmosphere becomes the receptacle where it remains in a state of mixture, the carbon in the state of carbonic acid gas, which, although specifically heavier than atmospheric air, and in a state of mixture only, and not of chemical combination, is found generally diffused in all situations, and varying less from a constant quantity than might be expected.

When we remember that of animal and vegetable bodies, the largest constituent part is carbon, and that therefore new bodies depend upon carbonaceous matter for their growth and composition, it will be obvious that if the carbon in the atmosphere can be rendered available for the sustenance of living vegetables, by any process that we can make use of for that purpose, that then, the most important operation in farming will have been performed.

I here premise, that the farmer does not make the crop to grow: he destroys the weeds, opens the ground to the proper depth, sows good seed in proper quantity and at the right season, covers it sufficiently—mixes with the soil such substances as are necessary for the growth of the plant, and in such place that the living plant can render them available to its growth; the laws originally impressed upon matter, and the blessing of Heaven produce the result.

Lime and magnesia were formerly considered as alkaline earths, and as such I shall here treat them; both of them have so much affinity for acids, that in nature I believe they are always found combined with them; my recollection is, that of the principal acids, both lime and magnesia have the least affinity for carbonic, and the greatest for sulphuric acid; yet as the stronger acids are not found in the atmosphere, whilst the carbonic acid is always there present—both lime and magnesia, when freshly calcined and in the states known as quick lime and pure magnesia, and exposed to the air, absorb carbonic acid gas from the atmosphere and become carbonates.

Thus far there appears to be an approach to general agreement, viz.: 1. That vegetable and animal matter are formed in part of carbon: 2. That in the decomposition of vegetable matters, the carbon in part escapes into the atmosphere, combined with oxygen, forming carbonic acid gas: 3. That lime and magnesia, when in a caustic state, as produced by calcination, and exposed to the air, absorb the carbonic acid gas. Therefore, when lime or magnesia in the caustic state is reduced to an impalpable powder, and thinly spread upon the surface of the earth, it will rapidly become a carbonate; and thus we shall have a carbonaceous compound upon the surface of the earth, in such a situation as to be accessible to the roots of plants. I believe that many plants have the power of separating the carbon of the carbonates of lime and magnesia, thus placed within their reach, and appropriating it to their own growth and increase; but the progress of the growth and development of plants, being under the government of the occult principle of life, our evidences can consist only of analogies—of probabilities drawn from the known properties of chemical substances.

Can the roots of plants absorb carbon from the carbonate of lime in the earth?

Certain plants do take up substances more difficult of solution, and for which, I know not that any plausible theory has been offered: thus, pure flint is found in the cuticle of some plants: in the scouring rush, *equisetum hyemale* and pigeon weed, *lithospermum arvense*, plants of our district, it is abundantly perceptible.

The following paragraph is extracted from the North American Review, for October 1842, stating a case wherein the roots of living plants overcame an existing combination much greater than the case in question.

"It must have been in the observation of many persons who cultivate ornamental bulbous roots in glasses, that the inner surface of the glass loses its polish and becomes rough; this is merely from the decomposition of the glass—now water alone will produce no such effect upon glass; the living plant communicates by its roots through the water, (for the roots are generally not in contact with the glass) an influence powerful enough to separate the potash of the glass from its strong combination, and transfer it to itself:—with the knowledge of such facts in our view, we are not left to the necessity of rejecting a belief in the existence of any process in vegetable life, merely because it cannot be explained by the laws of inorganic chemistry."

I make the following extracts from Liebig's Agricultural Chemistry, New World edition, 1842, page 9, on the article Humus:

"Woody fibre in a state of decay, is the substance called *humus*." "The carbonic acid which protects the undecayed humus from further change, is absorbed and taken away *by the fine fibres of the roots and by the roots themselves;* this is replaced by atmospheric air, by which process decay is renewed and a fresh portion of carbonic acid formed." "The roots perform the functions of the leaves from the first moment of their formation; they extract from the soil their proper nutriment, namely, the carbonic acid generated by the humus."

How will this theory be sustained by the results, so far as we have had experience?

If this be the true theory, lime should be spread upon the surface in the state of a fine powder, and suffered to lay upon the surface until it became mild by the absorption of carbonic acid gas—for the object is to obtain the carbonic acid to unite with the lime, *from the air, and not from the earth;* for if the lime is placed in a situation to obtain carbonic acid from the earth or the decaying humus of the soil, no advantage would be gained; it being very probable that living plants can assimilate the carbonic acid more easily from decaying humus, than from carbonate of lime—but if the lime absorbs the carbonic acid from the air, it is a quantity fixed in the soil in addition to what before existed there, as manure, decaying humus, &c.—So far as we have experience, it is, I believe, decidedly in confirmation of the theory. I applied lime to my grounds many years ago, putting it on at the same time with the stable manure to the wheat crop, and with some care to have them ploughed in together, without exposure to rain or dew; the results were so discouraging, that I discontinued the use of lime for some years—the wheat crop was generally injured, although good crops of grass succeeded, which should have been the result according to the theory—the carbonic acid gas, given out by the decomposing manure, instead of being made available to the growth of the wheat, became absorbed by the lime, thus diminishing the proper support of the wheat, but which was afterward furnished to the grass. Thirty or forty years ago, when little lime was used as a manure, it was occasionally mixed in the dung-hill; but more frequently mixed with corn-stalks and decaying vegetable matter, as a kind of compest; these methods of using it have been abandoned, as improper; which should be the result according to the theory.

According to this theory, there should be no disadvantage from using lime, (so called) much mixed with magnesia, as the latter requires about as much carbonic acid for its saturation as the former; it is more soluble, and in particular, is more acted upon by ammonia, but requires more time for its saturation with carbonic acid gas; it would therefore, require some longer time than pure lime, before being ploughed down.

From recently published analyses, it appears that the lime of the great valley, or range, passing through Montgomery, Chester, Lancaster and York, is nearly one half magnesia. Of this lime, millions of bushels are annually sold as a manure, and used in Jersey, Pennsylvania, Delaware and Maryland, with results so encouraging, that the demand has increased more than ten-fold, within ten years.

From the circumstance that lime is found in small quantities in some vegetables, it has been supposed that it is useful only for the purpose of furnishing the requisite quantity of lime thus found in their substance;—late experiments made by incinerating vegetable matters, go to show that 50 bushels of lime per acre, would not be taken up in an hundred years, by those plants in which it is found to exist in the largest proportion.

It may properly be objected, that if the roots of plants can and do decompose the carbonate of lime in the soil, and use the carbon or carbonic acid gas, for their own growth and nourishment, that the lime would again be caustic and uncombined. It is, however, a possible case, that plants may possess that power, and that they may not always be obliged to use it: it is known that in dark cellars and covered places open to air, but not to light, that nitrates are formed; and in whatever way any acids may be formed in the earth, having more affinity for lime than the carbonic, the latter would be ejected from its combination with the lime, which would unite with the stronger acid, (if the nitric, forming a soluble compound and sinking away in the earth,) in which case the carbonic acid gas would be uncombined, and as available for the growth of plants, as if arising from the decomposition of stable manure.

To conclude, my view is, that the air as well as the soil contains the elements of which vegetable matters are in part formed; that the living plant appropriates those elements to the purposes of its own growth and nourishment, by its roots from the soil, and by its leaves from the air—that the *air* always contains a sufficiency of carbonic acid gas; but that the *soil* does not, and that we spread lime upon the soil to absorb the carbonic acid gas from the air, to add it to the soil. A. W. Corson.

Whitemarsh, Pa.

For the Farmers' Cabinet.

Colman's European Agricultural Reports.

Messrs. Editors,—Mr. Colman's tour to Europe, will prove of vast importance to the Agricultural community of both countries; while for himself, there is no profession or occupation so well calculated to draw forth those energies, which all who know him, admit that he is possessed of in an eminent degree. With a head to discriminate, a hand to execute, and a tongue to express the feelings of a heart devotedly attached to the noble profession of agriculture, it is certain that his periodical reports will be replete with the most interesting matter that can occupy the attention of practical men in both countries—the wish of English farmers to know what an enlightened American agriculturist will think and say of them, being quite as natural as for the American farmer to be desirous of knowing how the English agriculturists can progress at all, under a load of taxation that would grind any other class of men to powder.

On Mr. Colman's arrival in England, he will be struck with surprise at the great superiority of the agricultural implements and tools of this country, in variety, diversity of shape and quality, in general—the plough, in all its different forms and elegance of finish, in particular; indeed an Englishman scarcely knows how to express the difference which he observes in their favour in this country; and it is cause of gratulation, to find it is Mr. Colman's intention to take with him some of our ploughs for presentation to the Royal Agricultural Society of England, and others of note in that country and France. This will, indeed, be to open a door of communication, the good results arising from which are scarcely to be appreciated, especially as it is known that he is as competent to guide a plough as to lecture upon it, or to describe its parts and qualities. At the same time, he will be as much struck with the superiority of the *husbandry** of England over that of this country, and which he will no doubt be candid enough to acknowledge, particularly as it is his intention to visit that remarkable spot, the island of Jersey, where he will witness that *virtue* portrayed in living characters; for assuredly, there is no part of the world where, in the circumference of 40 miles only, with a population of great density, will he find more good management, careful prudence, or rigid economy—*good husbandry;* indeed, there is no part of the globe that offers to the agriculturist so fair a field for contemplation, as the island of Jersey. In the first place, its beautiful location, soil and climate; its almost republican form of government, which to an American, must have charms indeed; its peculiar code of laws, dating as far back as the time of Rollo, so lenient in criminal cases, as to have given rise to the observation, "a man must have strong friends to get hanged in Jersey," &c. And then, its elegant and diminutive breed of Dairy cattle of the purest blood; the peculiar mode of management, by which their owners believe they can secure to themselves a very large proportion of heifer calves; their method of feeding stock by *tethering*, by which more than double the number can be maintained on the same land; their excellent quality of butter, although there is not a spring-house on the island: their practice of trench-ploughing and spade-labour in the fields, by which they raise such enormous crops of lucerne, parsnips, potatoes and grain, as far surpass the average yield of any of the counties of England; it being 37 bushels of wheat, and 29,077 lbs. of potatoes per acre. Devonshire, 16 bushels only, of wheat per acre. The opportunity of ascertaining whether the Mediterranean wheat of this country is not identical with that, known there as the *Tres mois*, or three months, which is a spring wheat: the method of manuring with the sea-weed and its ashes, and the cause of freedom from rust of the wheat crop; the advantage of visiting Colonel Le Couteur, and examining his interesting collection of wheats, of almost every variety; and the chance afforded, of setting to rest the question of the virtues of the *Divining rod*, for the discovery of springs of water in the earth, by investigating the subject on the spot, and witnessing the operation performed by the hands of a person who has pointed out by these means, hundreds of springs of water in a rock of primitive or granite formation, of which the island is composed, and which are not to be met with except in its fissures; thus increasing the difficulty of ascertaining where they lie. And lastly, to discover the secret, by which these islanders contrive, on a farm of four acres of land, "to live and get gain."*

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* "Agriculture, the art of raising crops. Husbandry, the art of preserving and expending them."

But the glory of English agriculture is its sheep husbandry; and here will be an ample field for the tourist's labours—all new ground too, and requiring his peculiar tact of character in the cultivation of it. And although it may be true, that much relating to the subject might be foreign to this country in its present circumstances, yet if a Colman cannot perceive that *much* also may be made subservient to our present state of agricultural attainment, it will be strange indeed. The introduction of a regular rotation of green crops, the turnip especially, has made England what she is; and the system will be as applicable here as elsewhere, when taken up and prosecuted on a regular and sufficiently extended scale: the theory is correct, and therefore the practice must correspond. P.

Philadelphia, April 16th, 1843.

A modern writer of a series of articles upon electricity, published in the Magazine of Domestic Economy, of 1841, has adduced evidences in proof of the universal agency of that ethereal agent, which are equally bold and striking. He says:

"There is life in the seed and in the embryo plant, which makes the first to germinate, the latter to grow, become developed, and acquire an organization it did not at first possess. We know not what this living principle is in plants, which possess neither sensibility nor locomotion, nor volition; but we may readily hazard the supposition, that it is closely connected with electrical action, which excites the efforts of vegetation, and governs all the changes and functions of its organs. The absorption by plants of carbonic acid, and the assimilation of its carbon as nourishment, and the emission into the atmosphere of its oxygen, under the influence of light, the decomposition of water by the leaves of plants, the absorption of its hydrogen, the rejection of its oxygen, which is diffused through the ambient air, the giving out by plants of carbonic acid in the dark; these, and the various other functions of vegetation, are governed by electrical agency."—*The British Farmer's Magazine.*

For the Farmers' Cabinet.

The Milch Cow.

I know not that I can better notice the Montgomery Farmer's communication in your last, than by referring him to P. M.'s article in the same number, giving an account of the life and death of the M'Elroy Cow. Here is one of our very best breeders of pure Short-horns, and most intelligent correspondents of the Cabinet, *telling tales out of school*, or I am much mistaken. The fact is, when a cow makes 16 pounds of butter a week, I believe we would all be apt to call her "my beauty," even if she were "hollow backed, and consequently large bellied, with a light thigh;" all indications of deep milking; P. M.'s "Bessy" exhibiting the latter of these defects, in a way so as to add at least 50 per cent. to her value in my eye, and that of every one who understands the matter—her owner's, especially.

P. M.'s recommendation to agricultural societies to pay more attention to milking stock than they have hitherto done, giving premiums to the best milkers, without regard to shape or breed, is refreshing; the more so, coming from a Short-horn breeder, it shows an independence of mind not always found even among breeders.

In a recent publication on the management of the Mid-Lothian Dairies, the author observes: "The farmers now do not even rear their own milch cows, but purchase them from time to time, as required, in some cases every season; so that their dairy *is always in full milk*, the new cows being purchased newly calved; and those of the former year are then fattened and put off to the butcher." And with this I take leave of "A Montgomery County Farmer," admitting that every one has a right to his own opinion, and is at liberty to convert others who differ from him *if he can.*

Zebu.

A late traveller in Norway, asserts that the Norwegians, in their journies over the half frozen rivers, use the following contrivance to release their horses when they fall through holes in the ice, viz: they throw a noose over their necks, which they pull tight, till the horse, beginning to be strangled, has its abdomen so much swelled with gas as to float on its back, and is thus easily drawn out of the water over the edge of the ice.—*London Medical Gazette.*

"What's beauty? Call ye that your own?—
A flower that fades as soon as blown."

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* See "Dialogues," page 182, vol. 3, and 208, vol. 4, of Cabinet.

Hints on Manuring.

The usual mode of application of farm-yard manure is, by carting and spreading the materials on the surface of a field when in an incipient state, and then burying them with the plough; experience proving that the decomposition of vegetable and animal manure is in proportion to the state of the land to which it is given; so that, if the field be in an exhausted state, and only one ploughing follows, just to bury the manure, its decomposition and chemical and mechanical union with the soil will be very slow. Manure so employed, is in fact wasted, instead of being made the most of, as when put early on a fallow and worked with it, because the manure, when buried at one ploughing, lies in contact for a whole year, with the same surfaces of the soil, and being in lumps, its sphere of contact and of action must be proportionately small: and the consequence is, that less fermentation takes place than really ought, and a portion of the manure will escape in gas from its own fermentation, after the saturation of the contiguous particles of the soil has been completed, and the absence of more fresh particles to arrest it; while, if plants are growing immediately above those lumps, they are injured from apoplexy, and lodging and rust of the grain that follows, by receiving this food too readily and not sufficiently diluted; and this is the reason why fish manure or yard manure is so soon exhausted, when put on a field to be immediately cropped, and is not cultivated previously: stubbles, when ploughed in, on poor and half-cultivated lands, will remain with very little decay for a whole year, from the existence of the strong balance of affinities resulting from the exposed particles being already saturated, and no new ones brought up to the sun and air, when no fresh combinations or fermentation can take place: whereas, if stubbles are ploughed in, preparatory to a fallow, so as to have the benefit of several successive ploughings and harrowings, nearly or quite the whole of the stubble will be decomposed and blended with the soil, and be rendered a valuable manure, by the reciprocal fermentation of the land and the stubble—the former set into activity by the cultivation, and the latter, from its easy decomposition, soon feeling the effect of the former; when they act conjointly in their general fermentative and fertilizing process.

When a crop is to be principally benefited by the manure laid on a field, with one ploughing only, the manure should be rich, and in a forward state of decay; because its decay, when in a long or green state, will be unassisted by cultivation, and the affinities of the particles of the soil will be too strong in their balance to expedite the process. The manure in this case, will require to be brought into that state of decay, before it is applied, which will insure its own fermentation afterwards, without so much of the aid from cultivation; and then, like shavings to a nearly extinguished fire, a partial overthrow of the strong balance of affinities of the soil will be produced, and thus far restore its fertility: but manuring in this way, is at the expense of the manure itself, by the loss that necessarily ensues, whilst the heap lies fermenting in the mixen, in order to its being reduced to the requisite state of decay; which decay, or rather calcination, causes a portion of its best elements, as well as quantity, to be evolved to the winds. Again, when the manure is laid on only before the last ploughing, even if it be a fallow, and a crop be then sown, the manure is found only partially distributed in the soil, and more or less in lumps; and before the young and tender plants can reach these with their delicate fibres, many perish. The above circumstances lead to the conclusion, that both in the garden and in the field, the best time and manner of applying vegetable and animal manures—indeed, manures of every description, is on a fallow; and to cart and spread them on the land, either in the autumn, winter or spring, according to their nature and circumstances; when there will be sufficient time to mechanically mix them well with the soil, by successive ploughings and harrowings. By the experience of the best gardeners, raw or fresh manure is never found so healthy for plants, as when it has been digested and blended with the soil by previous fermentation and cultivation, because the materials of the raw manure are forced, as it were, upon the plants in an unselected, undiluted, crude state; thus favouring, if not causing disease, apoplexy, or extravagant and injurious fertility: the only exception to be adduced, is on stiff clay lands, when it might operate also mechanically in keeping the soil more open.

By the manure being so early applied, the particles of earth are more quickly and generally divided; therefore, the sooner and better are they able to admit the fresh air, rain and dews; thus favouring their decomposition and union with the soil; and likewise the same of the manures, which, uniting in their effects, co-operate with the plough most powerfully in the general increase of fermentation and pulverization; the thermometer always denoting an increase of temperature when inserted about three inches into the soil after recent cultivation, and also after manuring; but when these are both combined, the rise in the instrument will be found proportionally higher. Under these favourable facts, it is not to be wondered at, that the long, strawey manure becomes soon reduced to a short, fine state, and distributed regularly by after cultivation; and that when any delicate seeds are sown on a field thus treated, they are assisted in their infant vegetation by the increased native powers of fermentation, in the early manured and well pulverized soil: their first roots having the great advantage of the necessary food being immediately contiguous to them, and in that state of delicate suspension, or balance of their affinities, that the least vegetable effort of the plants is sufficient to overthrow; and, in consequence, such a tilth is more favourable to their unfolding their future vigor, and their arriving perfect at maturity. If the reasoning here employed be correct, this favourable conclusion may be drawn—that the early application of vegetable, animal and other manures to the fallow, contributes in a multiplied degree, to the fertilizing the same, by the *mechanical* as well as *chemical* assistance which they impart to the power which the soil has, of combining with, and decomposing air and water, with, at the same time, their pulverizing effects; which objects could not be gained, if the manures were applied only before the last ploughing; and by this practice also, the four following points are gained, viz.:

1st. Considerable less loss in manure, by its fermenting in the soil, instead of the mix-hill. 2nd. The soil deriving more fertility by the early application of the manure than when put on late, and this at no additional expense. 3rd. The manure when carted on the land early, less loss ensues from evaporation. 4th. If any kneading or treading of the soil should take place during the carting, there is time afterwards to get the better of the evil, with having the manure to assist the husbandman's efforts.

Bland's Agriculture.

From the American Agriculturist.

Cost of a Farm, &c., on the Western Prairies.

No, no, gentlemen, "your old friend" is not "lost in a cane-brake," nor yet in a snow storm; although one of my neighbours has been within a week past, and actually perished, and that too, in November, in latitude 41½°. He was on a "trip to mill," and got lost on a large prairie on the night of the 16th inst., and perished in one of the most severe storms ever known at this season, since the country was settled.

Little do you know in your "thick settlements," what the pioneers of these "new settlements" have to endure. Not that there is much danger of being "taken by a bear," as the only one that ever ventured into "these diggings," fell a victim to my rifle. As to my "taking to politics," I cannot tell what may happen, as I have known many instances of insanity, "about these days." You will have received "late information from the prairies," before this, which will tell you that the fire of improvement is spreading. The staple commodity of the prairies has always been wheat; and the price heretofore has been so high, that the cultivators have entirely overlooked the necessity of providing, while they may, for a different state of things; consequently the great reduction in price has fallen heavily upon this region. It will not now command over 38 cents in the Chicago market, and although under the operation of some of the beautiful theories of our politicians, coarse wool is equally depressed, yet when you take into consideration that a vast amount of wheat has this season been hauled into Chicago, from 100 to 200 miles, the difference in transportation is so great as to appear at the first glance, vastly in favour of wool.

But I would not wish to be understood as advising the prairie farmer to turn his attention to wool alone. The farmers in general turn their attention too much to one object. At one time it is wheat—again pork—and so on. And the grand difficulty is the great want of capital. On this account they are compelled to submit to forced sales. They are unable to hold over a crop. In fact, if able, they have yet to learn how wheat can be kept in stack, as at present they are unable to find storage for the grain after threshing.

You hear complaints of the low price of beef. Do you know how low it can be produced? I believe you are advised that no finer beef was ever eaten than that made upon prairie grass. Let me tell you the actual cost. I can buy calves at one dollar and fifty cents each. I have and can hire them wintered until four years old, for one dollar and fifty cents, each winter. Here, then, I can have the finest fat steers four and a half years old, for seven dollars and fifty cents a head—cows, of course, at the same cost, including a couple of calves. As you are whole hog men, I will give you a few items, and leave it to you to "cypher out" the actual cost of western pork. In the first place, pigs are a spontaneous production. Corn on the farm, the present year, and perhaps it is about an average, within 50 or 60 miles of Chicago, is not worth over 12½ cents a bushel. Oats eight to ten cents, and potatoes less. And they being so low, I will not pretend to fix a price upon beets, rutabagas, carrots, &c., but they can be raised *cheap*. The summer feed costs little or nothing, and as often as every other year, hogs will get fat upon the mast, which our oak and hickory groves produce abundantly. The next question that I expect your eastern readers to ask, is, Can prairie farmers raise grain at these prices? I will state a few facts, and they shall draw conclusions.

The first cost of land is one dollar and twenty-five cents an acre. The first ploughing we generally count as cost, though erroneously. This is worth one dollar and fifty cents an acre; or to be better understood, I will state differently. Prairie land is abundant at government price; but timber is mostly in second hands, and is held higher.

A quarter section of prairie, that is, 160 acres, at $1 25, is	$200
Timber, say 40 acres, which is more than enough, at $3.	120
Breaking up the prairie, at $1 50.	240
Fencing it into four lots, eight rails high and stakes, 960 rods, or three miles, 15,366 rails, at one ct. 153 66; 3,840 stakes, at ½ ct. 19 20.	173
A good comfortable double log cabin, such as first settlers generally occupy.	50
Other small buildings and temporary sheds,	50
Average cost of a well with pump, $30, with buckets, $15.	15
I will add to cover contingencies, such as half an acre of land well paled in for garden, a cow-yard, hog-pen, and other "fixings."	72
This makes the cost of the farm, independent of the woodland, just $5 an acre—the total,	$920

Here, then, are 160 acres of as rich soil as it is possible to imagine, all ready for the emigrant to take possession of and put in a crop, for the sum of $800. The first crop of corn will average about 15 bushels; in oats, about 20 bushels; in wheat, about 10 bushels; potatoes, about 150; turnips, or rutabagas, 300; buckwheat, 25; beans, peas, millet, pumpkins, melons, &c., &c., "a right smart chance," and some of the latter, as big "as a good sizable boy can tote." The second crop will be some better, though the sods will yet be in the way of cultivation. After this you have a deep, loose, rich black soil, which as you do unto it, so it will do unto you. The practice generally adopted, is to take the skin and starve the body—burning straw and wasting manure—"running over" four times as much land as can be *cultivated*. In my statement of prices, I have taken this county (the Northwestern one in Indiana) for a basis. In others there may be a slight variation. Both in this State and Illinois, Missouri and Iowa territories, there are thousands of locations to be had at about the rates stated.

If such "information from the prairies" is such as you want, you can be furnished from time to time, by "Your old friend,"

SOLON ROBINSON.

Lake C. H., Ia., Nov. 25th, 1842.

For the Farmers' Cabinet.

The Peach on the Plum-stock.

In one of the former volumes of the Cabinet, a correspondent advises, as a protection against the worm, to bud the peach upon the plum-stock; and asks, if any of your readers can inform whether the plan has ever been carried into execution, and what has been the result?

I beg to state, in the orchard of Mr. Caleb Brinton, at Prospect Hill, in Salisbury, Lancaster county, there is a peach tree many years old, that has been budded on the plum stock, about 18 inches from the ground. At the point of junction, the peach tree is about double the size of the stock, and is completely girdled by the worms, which have also extended their ravages downwards into the plum-stock for about the space of nine inches; and from this part of the tree have been extracted, the present season, perhaps not fewer than 20 worms, which have preyed indiscriminately on both peach and plum, at, and above and below the junction formed by budding; but not a worm has been detected at the *root* of the plum-stock; the tree, however, being as completely destroyed as though the evil had proceeded from thence; and forming a perfectly satisfactory answer to your correspondent's inquiry. It is worthy of remark, that during a late examination of the peach trees in this orchard, one half of which is kept in grass, the other under cultivation, there were about four times as many worms found in those growing in the cultivated portion of the orchard, as in those grown around by grass—an interesting fact for the Delaware peach growers, who, we are told, keep their peach orchards under cultivation, by way of protection.

C. B.

Pequea Valley.

For the Farmers' Cabinet.

Magnesia, a necessary constituent of Soils and Plants.

As the controversy with regard to magnesian lime being superior as a fertilizing agent, to common lime destitute of magnesia, is, we hope, settled, I propose resting the magnesia subject on its true ground, on its intrinsic merit as a specific fertilizer. My own experience in the application of magnesian lime and the corresponding results, so completely harmonize with the theory of the most celebrated chemists, (and practice is the true test of theory) that, according to Crockett's phraseology, "I am sure I am right." With a view to abbreviate this article, I will just observe, that much of my argument has already been anticipated by a Delawarian in your last number, and indeed enough to prove my position. I shall merely add a few more quotations from Liebig and Desaussure, which are to the point: and by way of reply to my friend Vanleer, who has favoured me with another *rather facetious* article, I shall give him a respectful passing notice, in the meantime. By the way, it may be no small panegyric of a Delawarian, to say, his paper is sufficiently strong and irresistible, of itself, to repulse the whole array of anti-magnesians, whose notions, when operated upon by the panoply of science, vanish like a vision. But to my friend Vanleer, I would say, his peculiar tact and ability, and zeal, in order to lead to distinction or eminence, must be enlisted in a better cause. But as he has made the *amend honourable*, and *yields* his right to the "golden plough," we should be rude indeed, did we not exercise towards a prostrate foe, that genuine magnanimity which is the characteristic of noble victors! He has been attacked by so many correspondents, while none of his anti-magnesian allies have come to his rescue, I would now interfere in his behalf, and say, spare him! but as he has in his last article, filed four exceptions, or counts, against me, I shall now proceed to examine them separately: 1st. For stating that 300 bushels of lime are applied to some of the best land in Great Britain. 2nd. That some soils are unfriendly to mineral agency. 3rd. That barren soils may be renovated by lime, and indirectly by clover. 4th. The conflicting statement, that farms may be enriched by stable manure, *without* lime. Ans. 1st. My farm has received in all, from time to time, 300 bushels of magnesian lime per acre, at the rate of 100 to 120 bushels per acre, at a time; and will bear 200 bushels per acre, judiciously applied, at a time; yet I shall not pretend to say this rate is economical or advisable. A friend near me, has put on clay land, 250 bushels at a time: not at all strange, then, that 100 to 200 bushels of lime are applied in England, on their more highly manured and cultivated acres. The quantity of lime may always be regulated by the quantity of manure or vegetable matter in the soil: not only to furnish carbonic acid, to enable the hot lime to yield its causticity, but also to furnish matter to combine with or act upon; the productive power of the land of course, is correspondingly increased. Ans. 2nd. Cold and wet soils are *unfriendly to mineral agency*, simply, because lime will harden and solidify under water, and because wet lands are not permeable to light and air, and partake of the temperature of the water, with which they are saturated; consequently the process of fermentation or putrefaction is retarded, if not prevented. Again, on the same farm we frequently see the effects of lime on upland, more striking on some fields than on others; generally, perhaps, owing to a lack of vegetable substance, and therefore more unfriendly to the speedy action of *mineral agency*. Ans. 3rd. Barren tracts, cannot be renovated by clover *directly*, because clover will not *grow*; yet by applying lime on a barren surface, for a year or longer, before it is cultivated, there will be a new spontaneous growth of grass; (see article in March number of Cabinet, by a Deer Creek farmer,) and after a course of cultivation, may be additionally improved by clover, which will then flourish. Ans. 4th. Many farms like Townsend's, are kept in a high state of cultivation, by stable or animal manure, without any lime or magnesia being applied, and why? Because animal manures furnish both these alkalies, in addition to what the soil may contain.

According to Liebig, when we manure land with the dung of the cow or sheep, we supply it with silicate of potash (the pabulum of wheat) and some salts of sulphuric acid. In human fæces, applied in different parts of Europe, we give the land phosphate of lime and magnesia. And in the dung of the horse, we give it phosphate of magnesia and silicate of potash.

"Without alkalies and alkaline bases, most plants cannot exist." "Seeds of wheat or corn, could not be formed without phosphate of magnesia." "Soils are rendered unfit for the cultivation of potatoes, even though the tops be returned to the soil after the removal of the crop, unless some means are adopted to replace the phosphate of magnesia, removed by the roots or potatoes."

"We may form an idea of the quantity of phosphate of magnesia in grain and grass, when we consider that the concretions in the cœcum of horses, consist of phosphate of magnesia and ammonia, which was obtained from hay and grain consumed as food."

"It is now certain, that potash, soda and magnesia, can be extracted from all parts of the structure of plants, in the form of salts of organic acids." "In Flanders, the yearly loss of the necessary matters in the soil is completely restored, by covering the fields with the ashes of wood or bones, which may or may not have been lixiviated, and of which the greatest part consists of the phosphates of lime and magnesia."

The above quotations are all from Liebig.

According to Desaussure, "plants require unequal quantities of the component parts of soils, in different stages of their development: an observation of much importance, in considering the growth of plants. Thus wheat yielded one-third more ashes, one month before blossoming, than while in blossom, and one-third less after the ripening of the seeds. It is therefore evident, that wheat from the time of its flowering, restores a part of its organic constituents to the soil, leaving the phosphate of magnesia remaining in the grain or seeds."

According to Liebig, his analysis of soil, from the surface of a field distinguished for its fertility in Belgium, gave, in 100 parts:

Silica, - - - - - -	64.517
Alumini, - - - - -	4.810
Peroxide of iron, - - - -	8.316
Do. manganese, - - - -	.800
Carbonate of lime, - - - -	9.403
Do. *magnesia*, - - - -	10.361
Pot-ash, - - - - -	.100
Soda, - - - - - -	.013
Phosphoric acid, - - - -	1.221
Sulphuric acid, - - - - -	.009
Chlorine, - - - - -	.003
Humus, - - - - - -	.447
	100.000

The question by Mr. Vanleer was anticipated, in relation to lime being applied in larger quantity than plaster, by "A Delawarian," and fully expounded; but in addition, I would just say, plaster is necessary *below* the surface to fix the ammonia in the soil, as well as *on* the surface, to fix the ammonia of the atmosphere. In the spring of 1832, I sowed a bushel of plaster for experiment, on an acre, in the middle of a wheat field; after harvest, the field was once ploughed deeply and again seeded in wheat, and in the spring of 1833, seeded with clover; the growth on the above acre, where the plaster was ploughed down, was the most surprising effect of plaster I have ever seen, interfering with the cradle at harvest; while the adjacent parts of the field presented a diminutive and sickly contrast. The allusion to an experiment made by Daniel Buckley, Esq., by spreading plaster with a shovel, at the rate of 30 bushels per acre, must have been understood in a *Pickwickian sense certainly*. Mr. Buckley lived and died within a good gun-shot of my residence, where I write, and yet *we* know nothing of any such extravagant experiment having been made by him here.

A Lancaster County Farmer.

Pequea, April 17th, 1843.

P. S. The above remarks having been written immediately after reading Mr. Vanleer's communication, and that too, upon the spur of the moment, I have found by *reviewing* his article, one of his queries remains unanswered. He asks, why the man who kept a small farm in good order with animal manures, without lime, could not, after extending his acres or domains, keep his large farm in the same good condition without lime? I answer, because he did not make animal manure, which as above proven, furnishes both lime and magnesia, in sufficient abundance, or in the same proportion, as on the small farm, and by depletion, his land deteriorated. I repeat emphatically—use lime, plaster and magnesia, liberally and judiciously, in addition to all the ashes and animal manure you can "*rake and scrape;*" on account of our animal manure not keeping pace with our system of cropping, we *must* use mineral manures, as important auxiliaries and additional resources, to improve our farms and enable us to extend and increase our crops. Vegetables or plants, like animals, thrive best upon a great variety of food: when analysed or resolved into their original elements, we find them composed of a great variety of substances. If Mr. Vanleer objects to my signature, *instead* of "striking at a mask," if desired, the editor will *unmask*.

A. L. Farmer.

Rebellious Hens.—A neighbour of ours states, that hog's lard is the best thing he can find to mix with the dough he gives to his hens. He says, one cut of this fat, as large as a walnut, will set a hen to laying immediately after she has been broken up from her setting; and thus his hens lay through the whole winter. Will some more experimenters try the virtue of hog's lard?—*Massachusetts Ploughman.*

For the Farmers' Cabinet.

Fall Ploughing.

The writers in the Cabinet, who advocate the system of fall ploughing, will be gratified to learn that the experiment has been made by our friend Mr. Isaac Roberts, of Spring-mill, on an extensive scale; having ploughed up his corn-ground, 16 acres, the last autumn, laying it high and dry for the winter, and sowing it this spring with oats, without another stirring, on the day when his neighbours began to plough their land for the same crop; and I confess that I never saw any management that bade fairer for success: for although the land lies high and is liable to wash, and indeed has suffered somewhat from that cause, yet one single tine of the harrow, after the oats were sown, was quite sufficient to prepare the land for the clover seed; another tine being ample to complete the business, leaving the surface like an ash-heap. Thus he has stolen a march upon us, and gained a week, which in this late season, may be perhaps, about equal to the rent of the land, besides relieving himself of much toil and trouble. I fancy I now begin to see into the matter, and regret that I am not prepared to take advantage of the circumstance; so true is it, that a farmer's life consists but of a few seasons, one of which being missed, can never be recalled—let our young men, therefore, be up and doing, "while it is day."

On walking over the land, I think I have convinced myself that the thing must work right. Here is a finely pulverized surface, in which for the seed to vegetate, with a compact under soil, in which for the roots of the plants to hold; which is as necessary for the growth of oats as for wheat; it having been ascertained, that both plants feed on the same pabulum, and require the same tenacity of soil for their support: and I shall watch with much interest the growth of the crop, not doubting that it will stand erect at the time of harvest, and not fall before ripening, as is the very general state of our oat crops. But this is only a part of our friend's intended plan; he sows red clover on his oats, allowing an extra quantity of seed, with the expectation of obtaining from so pulverized and enriched a surface, a full plant and very clean crop: and on this clover, early the next spring, or rather in late winter, he will carry abroad his dung from the straw-yard as a top-dressing, allowing it to be grown in by the crop; after which he may either take two crops of hay, or one of hay, and feed lightly the second crop of clover, and turn down for wheat; sowing after a single ploughing, with every prospect in the world of escaping the rust, cheating the fly, and obtaining a glorious crop of grain, with not too much straw; leaving the land in good heart for any other crop, and varying that eternal routine, corn, oats, wheat, of which I must confess I have long been weary. The above, I find is the English mode of management for wheat; and although it is readily admitted that our circumstances and climate are different, yet the first principles of agriculture are the same at all times and in all places, and this is one that might be rationally adopted, without extra labour or cost, and promising full success—indeed what is there to offer against it? I can see nothing, and therefore repeat, I wish I was prepared to go into the experiment, being quite ready to share the risk, and take the chance for profit.

Since writing the above, a friend assures me that this plan is by no means original, for he remembers that 40 years ago, it was practised by an intelligent person whom he knew, and that it was crowned with the most perfect success, his crop being nearly doubled by it; and yet he relinquished it, although he could never tell why! And so, with respect to the proposal to raise corn on the same land every year in succession; I saw but yesterday, a man who assures me he has practised this plan for the last five years, and has regularly obtained a better crop—that of last year the best; and he intends to continue the practice. I presume, however, that there *is* something original in the proposal to manure the land with the corn-stalks, by ploughing them under in the autumn; and yet I see nothing preposterous in it, particularly if Bommer's mode of decomposing vegetable substances should be applicable in the case; probably the articles which he uses to create fermentation, could be applied to the stalks and roots as they lie along the furrow, and thus a perfect amalgamation with the soil might be produced, by the time of planting in the spring, requiring no further stirring. Are there any of your readers who can inform us, whether Bommer's method could be made subservient to the purpose? T. D.

Spring Mill, April, 1843.

Red Cedar.—If the lining of drawers in which clothes are kept is made of pencil cedar, no moths or other destructive insects will get into them. This wood is cheaper than wainscot or mahogany, and gives an agreeable perfume to the clothes.—*New Genesee Farmer.*

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

PHILADELPHIA, FIFTH MONTH, 1843.

IN our last number we ventured the opinion, that the use of marl, &c., was about to open a new era in Southern agriculture. Much that we hear from that section of our country confirms this sentiment. The President of the State Agricultural Society of South Carolina, in a circular which we find in the last number of the Southern Agriculturist, remarks; "with a genial climate, and a soil naturally fertile and admirably adapted to many of the most valuable crops in the world, the wealth of South Carolina might be immeasurably increased, if her agricultural resources were known. In their examination and developement, Mr. Ruffin is now engaged. His discoveries have already far exceeded his anticipations. Extensive beds of marl of unusual abundance and richness, it is now evident, not only exist in the lower districts, but there are satisfactory indications, that calcareous matter in some form, is generally diffused through the State." And in a recent letter from Edmund Ruffin, the agricultural surveyor of the State, to the President abovementioned, he expresses his opinion, that "millions of dollars in value, of newly created agricultural wealth, will accrue to the State within a few years after the commencement of the general use of calcareous manures." He says also, "from my examinations already made, I feel authorised to assert that the marl, or soft limestone formation of South Carolina, is more widely extended and abundant, more rich in calcareous earth, and more generally accessible, and that the proper application will be more profitable, compared with the necessary outlay, than of any other extensive region yet known."

THE Central New York Farmer, as we learn from the March number, has been adding to its Editorial strength—and we trust, to its *potentiality* of usefulness, as Dr. Johnson might say, by enlisting C. N. Bement, Esq., of Albany, in its service. We congratulate the former editors upon this circumstance.

"There is no monopoly in agriculture; no patent rights for the best method of cultivating crops;" says the new co-editor: "the field is broad and open to all, and the best requital we can make for distinguished benefits resulting from an enlightened system of practice, is to tender to others a participation in the benefits which our better practice confers." He regards the circulation of "agricultural journals in the light of the subsoil plough—they penetrate into the under crust" of the mind, and by stirring up and exciting the faculties, set the farmers to thinking, and have thus been instrumental in sending forth the spirit of improvement over our land, from which vast benefits have resulted. "Farmers," says he—and we would like our friends to continue to bear it in mind—"farmers want plain facts conveyed in plain language; descriptions of processes, and statements of experiments, which, if followed, may lead to increased profits of labour."

C. CUMMINGS, glue manufacturer of this city, informed us a few days since, that both last year and the year before, he sold several hundred tons of bones to be shipped to Hull, in England, for the purpose of being ground for manure. And this season, he assures us there will be at least 500 tons of the same article shipped hence, for the same place. Why is it that bone dust is so much more highly valued in England, than by our own farmers? Is it owing to a difference of climate, soil, or mode of application? or have our farmers not sufficiently tried the article, to appreciate its value. We believe the English apply it principally to their root crops.

"THE FARMER'S ENCYCLOPÆDIA AND DICTIONARY OF RURAL AFFAIRS:

Embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by CUTHBERT W. JOHNSON; enlarged, improved and adapted to the United States, by a *Practical Farmer*, assisted by numerous scientific gentlemen, is now in course of publication by Carey & Hart, of this city."

The fifth number of this work has appeared since our last, and is an excellent one. It contains a full description of the mode of making capons. This is a part of rural economy, towards which a good deal of attention has latterly been directed. The curious in such matters, will find all the instruction they may need. We have also been particularly struck with the extended articles on *cattle*, and the caterpillar. These, with the highly interesting essay on bees, in the third number, are of more value to the practical man, than the cost of the whole work. The style in which it is executed, really does credit to the enterprising publishers.

SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. The money to be paid in advance.

THE first number of the second volume of the American Agriculturist, comes to us in a very neat form indeed. There is a decided improvement in the vignette—it is now quite ornamental to the first page. We had long trembled for that pig, treading upon the rake-tooth, with his nose under the scythe! It is published monthly in New York, at one dollar per annum, and is ably edited by A. B. Allen. A great variety of matter is judiciously thrown into this, as well as the preceding numbers, and it cannot fail to have an extensive and beneficial influence upon the good cause for which it is labouring.

WE are in the receipt of the Southern Cultivator, published every fortnight at Augusta, Ga., by J. W. and W. S. Jones. It is devoted to the Agriculture of the South, and gives promise to be an able auxiliary in promoting the substantial interests of that section of our country. It has our hearty good wishes.

THE HONEY BEE:

Its natural History, Physiology, and Management; by Edward Bevan; published in Philadelphia, by Carey & Hart;—price 31¼ cents—with 35 engravings on wood.

This is an excellent practical treatise, and should be in the hands of every person who keeps bees: and where is the farmer who might not just as well have a few swarms, as be without them? They are a delightful and companionable appendage to the farm-yard or garden, and often a source of very considerable profit. A friend who was a few days ago in our office, referred to a person in the State of New York, who sold one season, $39 worth of honey, from a single colony! "Who can withhold his admiration of the ingenuity and judgment of the bees?" says our author; and who does not relish the privilege of *sharing* with them, the treasures of the hive, the fruits of their industry and their master's care? We are much pleased with this volume, which the publishers have thrown into so cheap a form. It may be obtained either of them, or at this office.

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EDWIN CHANDLER,

Agent for Agricultural Machines of every description.

Our friends of the New Genesee Farmer, will please accept our thanks for the Bassano beet-seed. They shall be properly distributed.

POUDRETTE.

Arrangements have been made by the subscriber with D. K. Minor, of New York, for the sale of this valuable manure, as noticed on page 288. It may be obtained at the office of the Farmer's Cabinet, No. 50, North Fourth street, where we expect to keep a supply constantly on hand. Farmers, gardeners, and the truck growers in New Jersey, will now have an opportunity to avail themselves of an article, so much valued in Europe, and in the neighbourhood of New York, where it is manufactured. The price will be two dollars a barrel, where one or two only are taken —for three or more, it will be somewhat reduced.

Josiah Tatum.

The quantity of rain which fell during the Fourth month, (April,) 1843, was nearly four inches and three quarters. .... 4.723 inches.

Pennsylvania Hospital, Fifth mo. 1st, 1843.

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THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is edited by James Pedder and the Proprietor, and is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, whenever they can be appropriately introduced.

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THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK,

DEVOTED TO
AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

Vol. VII.—No. 11.] 6th mo. (June) 15th, 1843. [Whole No. 101.

JOSIAH TATUM,
PROPRIETOR AND PUBLISHER,
No. 50 North Fourth Street,
PHILADELPHIA.

Edited by the Proprietor and James Pedder.

Price one dollar per year.—For conditions see last page.

Guano.

Many inquiries have been made of us during the past spring, in relation to the celebrated Peruvian manure, called Guano. It gives us much pleasure to throw before our readers the following article from a late number of the British Farmer's Magazine, published in London. We think it will be read with a good deal of interest. In the purchase of manures for enriching his lands, it is an important object with the farmer—particularly with him who has them to haul a considerable distance—to obtain those which have the most strength in the least compass, and thus diminish the heavy expenses of transportation. The Guano, it would appear, possesses to a great extent, this advantage. We have not heard that any has been brought to this city. If, however, the accounts of its usefulness continue favourable, and the article can be obtained from its native location, the enterprize of our merchants will not fail soon to place it on our wharves.

Ed.

In your quarterly number for July, last year, pages 176 to 193, I presented your readers with the account of an interesting meeting of the County of Kerry Agricultural Society, from which arose the publication in this work of the best concentrated documents, analyses and results, then known as to the new (but yet old) and celebrated natural production, used as, and *called* manure; the Spanish name for *manure* being *Huano*. This article has been used for ages by the ancient and present Peruvian agriculturists, and only imported into England the last eighteen months, during which time, 3000 tons have been sold to manure the worn-out soils of England. This quantity has covered upwards of 40,000 statute acres. The north country graziers are putting 50 to 100 tons on one farm. They declare it saves them five pounds per acre, yielding them 20 to 30 per cent. larger crops, and bringing them to maturity much earlier—so very desirable to the British farmer, in our damp and humid climate. Guano sold at 22s. to 28s. per cwt. last year; it is now only 14s. to 15s. per cwt., and I believe even 12s. to 13s. per cwt. for large parcels, allowing a profit to the dealers. It is the most permanent fertilizer ever discovered; is chiefly aromatic; but the old deposits or strata, where found, are not so, the ammoniacal properties being concentrated and concreted. It remains for a long period of time in the land, and is not washed out by the rains; neither is it volatile, so as to rise into the air, as Professor Johnston, of Durham, states in his lectures on Agricultural Chemistry, consequently exercising a beneficial influence on the growing crops periodically, being a compound of nature consisting of the greatest variety of phosphates, muriates, urates, phosphoric, lythic, acids, organic matters, &c., of any article found in a natural state, all contributing food annually to the plants, as required by them.

From the numerous chemical ingredients composing the guano, no doubt it is of volcanic origin, in part; and as vegetation can only draw from the soil sufficient food in one season for its support, no more and no less, for its due development, growth and maturity, there is, of necessity, a supply of guano left in the soil, constantly drawing down from the atmosphere fresh ammoniacal life by the rains, which the "guanoical" particles keep in the soil, by means of their numerous inorganic matters, concretes, acids, &c., until it is wanted by the succeeding year's crop. So that one dressing of two or three cwt. per acre, (costing £1 10s. to £2,) will last many years, without further manure of any sort, by digging the soil over with a fork; and the agricultural professors, Pusey, of Oxford, and Johnston, of Durham, recommended the guano manure to the English farmer, at 20s. per cwt., as being a permanent and excellent nourisher of the soil. At times it is worth 12s. per cwt. in Peru. About fifty ship loads have arrived in England, paying as high as even £6 per ton, freight; and the total quantity imported to the present time, is about 12 to 15,000 tons; 3000 tons being consumed during the last eighteen months. The quantity left for next season, would not cover more than 100,000 acres; and I hear little more is coming, the loss being heavy. The farmer can scarcely expect it at a lower rate than it is at present; and if the London speculators get hold of the present stock—and we understand they are in treaty for it all—they may monopolize guano, and raise the price to double its present rate, as they did nitrate of soda three years back; when it may be adulterated, as nitrate of soda was at that time.

I would recommend every farmer to get it through a respectable agent in Liverpool, who will see that he gets the genuine guano, direct from the Queen's bonded stores, as imported from Peru; then he will have no fear of his crops failing, if properly put into the soil.

Guano is well suited to the humid climate of Great Britain, and especially Ireland, as by its peculiar chemical and attractive ammoniacal concretes and properties, it feeds the growing plants faster, which will enable the British farmer to get in his crops earlier; thus securing a longer period and many more chances of fair weather to get in his produce from the ground. At all events, it is well worthy of further and extensive use. Farmers should not be so timid. A few pounds would secure acres of large and good crops. Guano is considered, by all the accounts I have heard or read, as a treasure in Peru, and one of the valuable gifts of Heaven, that enables them to grow food for man and beast, from the barren sea-side, up to the rocky rude mountains, five, ten, twelve, and even 15,000 feet above the level of the sea. Without this guano, the Peruvians could not have raised crops to feed 15,000,000 of people that once inhabited Chili, Peru, &c. No doubt it must be one of the treasures of Peru, we say again, when the agriculturists there are complaining to the Peruvian government, and protesting against its exportation, for fear they should be short of a supply. The English, they state, have taken all our gold, and now they are taking all our guano also. However, the Peruvian government do not let it go for nothing; they have obtained £200,000 for allowing France and England to take it *for one year* only from their country. I understand the Belgian, Dutch, German, and French agriculturists are using the guano manure formation, as well as our own farmers in England, Ireland, Scotland and Wales, and that considerable shipments have been made to the West Indies, as well as the East Indies and St. Helena.

Guano is the best compound (a dry *compost*) fertilizer and nourisher of soils yet discovered, and can only be drawn out by the growing crops, in a course of years. In Peru, they have in the mountains, almost perpetual humidity, rains and dews near nine months in the year, and the sun only shines at intervals.

It was stated in July last, there were 3000 acres covering weekly, and that 1½ to 2 cwt. per acre, was the only outlay necessary; the guano to be well mixed with clean yellow sea-sand, ashes, old mould, charcoal, night-soil, scrapings of the roads, and common deal, or any kind of saw-dust; four parts of any of these to one part of guano, to be well mixed, and the guano first to be finely powdered, then to be thrown on the land, just before showers commence, broad-cast. In high districts, or dry weather, it is highly desirable, when convenient, and in all cases, to irrigate the land with a water-cart, that the guano may quickly get to the rootlets of the plants, as it can scarcely be put on the land in too small a quantity. In Peru they put it round the plant with finger and thumb, like pinches of snuff (guano is very like snuff,) and water it afterwards. In some cases it would be best to put it on in a state of solution; 12 gallons of water to 4 lbs. of guano, for hot and green-house plants, fruit trees, &c.

Naturalists disagree as to the origin of the guano formation. This is of little moment. In some parts it is like the sand of the desert, fine as the finest powder; in other islands, hard as the solid rock, 20, 30, and 40 feet deep. In the soft portion, all sorts of animals burrow in it like rabbits, thus living and dying in the guano. It is the best compound in nature, ready for the English farmer. Surely if the British farmer labour and toil to make his compost from his own stable and farm-yard manure, he would prefer to give the finish and polish to the earth, to induce dame *nature* to give her increase in due season, rather than run the precarious risk of his own compost failing, either from its being washed out of the soil by the rains, or not being properly compounded for the crops he may require.

The results from guano are highly satisfactory for all crops. A more or less quantity may be put on any field, according to the kind of produce required, the soil to be manured, and the condition of the land. And every farmer should study these points: he should read works on Agricultural Chemistry, Geology, Meteorology, Electricity, &c., as all the actions of nature, with the weather, I need not tell the scientific farmer, bear upon his success as an agriculturist. And if he will carry his business to perfection, he should consult his neighbour and medical man, on all intricate subjects, as he would in case of a disease amongst his cattle and stock, or if one was out of health in his own family.

Suggestions for comparative experiments with Guano and other manures.

In addition to the foregoing, we take the following from the Appendix to Johnston's Agricultural Chemistry and Geology. It will be observed, that while the Farmer's Magazine ascribes to guano a *volcanic* origin, Professor Johnston speaks of it as an *animal* production. The farmer will leave this point for others to settle, while he is careful to look around, and see if his individual interest may be promoted by the use of this extraordinary article, when it shall come within his reach.—Ed.

Guano is the name given in South America to the dung of the sea-fowl, which hover in countless flocks along the shores of the Pacific, and which, from time immemorial, have deposited their droppings on the rocks and the islands which are met with along the coast of Peru.

Besides the fresh white guano which is deposited year by year in these localities, there exist, in some spots, large accumulations more or less buried beneath a covering of drifted sand, which have been thus buried and partially preserved from an unknown antiquity. This ancient guano is of a brown colour, more or less dark, and forms layers or heaps of limited extent, but which are said sometimes to exceed even 60 feet in thickness.

In the time of the Incas, this substance was known and highly valued as a manure,—the country along the coast, for a length of 200 leagues, was entirely manured by it,—the islands on which it was formed were carefully watched and preserved,—and it was declared to be a capital offence to kill any of the sea-fowl by which it was deposited. Ever since that time it has been more or less employed for the same purpose, and much of the culture now practised on this thinly-peopled coast, is entirely dependent for its success, if not for its existence, on the stores of manure which the sea-fowl thus place within reach of those parts of the country which are susceptible of cultivation.

In modern times, however, the access of foreign shipping, and the want of careful protection, have driven away many of the sea-fowl, and lessened to a very great degree, the production of the recent guano. Thus the country is more dependent than in former times, on the more ancient deposits, which are now assiduously sought for, and when discovered beneath the sand, are carefully excavated and transported to the sea-ports for sale.

The dung of birds of all kinds, when exposed to the air, gradually undergoes decomposition, gives off ammonia, and acquires a brown colour. As this ammonia is one of the most fertilizing substances it contains, it will be readily understood that the old brown guano is much less valuable as a manure, than that which is recent and white; hence the care of the ancient Peruvians in collecting the fresh, and their comparative neglect of the ancient guano.

When the brown guano is put into water, a large quantity of it—sometimes 70 per cent. of the whole—is dissolved. Hence it is, because the climate of Peru is so dry and arid, that in the plains rain scarcely ever falls, that the guano can accumulate as it is found to do. North and south of this line of coast, where rains are less unfrequent, such accumulations are not met with, though the birds appear equally plentiful, and it may be safely stated that, had the climate of Peru been like that of England, the rains would have washed the guano from the rocks almost as rapidly as it was deposited.

Of the brown guano, several cargoes have lately been brought to England by an enterprising merchant in Liverpool, and it has been deservedly recommended to the attention of British agriculturists. It has already been tried upon various crops, both of hay and corn, upon turnips also, and upon hops, and there can be no doubt whatever, that in our climate, as well as in that of Peru, it is fitted to promote vegetation to a very remarkable degree.

This brown guano varies much in quality, according probably to the degree of exposure to the air to which it has been subjected, or to its position in the deposit from which it has been dug. Two different portions, taken at random from the same box, gave me the following very different results:

1°.—Water, salts of ammonia, and organic matter, expelled by a red heat. - -	23.5 per ct.
Sulphate of soda, - - - - -	1.8 "
Common salt, with a little phosphate of soda,	30.3 "
Phosphate of lime, with a little phosphate of magnesia and carbonate of lime,	44.4 "
	100*

2°.—Ammonia. - - -	= 7.0	59.3 per ct.
Uric acid, - - -	= 0.8	
Water, carbonic and oxalic acids, &c., expelled by a red heat, - - -	= 51.5	
Common salt, with a little sulphate and phosphate of soda, - -		11.4 "
Phosphate of lime, &c. - -		29.3 "
		100

---

*The first contained also 8 per cent. and the second 1½ per cent. of sand, which has been left out of the true composition of the guano considered as free from sand.

According to M. Winterfeldt, this brown guano is sold at the ports near which it is obtained, at about three shillings a cwt. It might, therefore, if this be correct, be imported into this country, and sold at less than 10 shillings per cent. The price at present asked, however, is 25 shillings per cent., a cost at which it is doubtful if the English agriculturist can afford to use it.

In any case, it seems improbable that the guano can continue to be imported into this country for any length of time. It is absolutely necessary to the cultivation of the land in Peru,—and it is also diminishing in quantity,—the first settled government, therefore, which is formed in that country, must prohibit the further exportation of a substance so important to the national interests. It is a matter not unworthy of the attention of chemists, therefore, to consider whether a mixture similar to the guano, and of equal efficacy, cannot be formed by art—not only at a cost so reasonable as at once to make the British farmer independent of the importer,—but also in such abundance as at the same time to place so valuable a manure within the reach of all.

The following mixture contains the several ingredients found in guano, in nearly the average proportions; and I believe it is likely to be at least as efficacious as the natural guano, for all the crops to which the latter has hitherto been applied in this country:—

	£.	*s.*	*d.*
315 lbs. (7 bushels) of bone-dust, at 2s. 9d. per bushel.	0	19	0
100 lbs. of sulphate of ammonia,* containing 35 lbs. of ammonia, at 20s. a cwt.	0	18	0
5 lbs. of pearl-ash.	0	1	0
100 lbs. of common salt.	0	2	0
11 lbs. of dry sulphate of soda.	0	1	0
531 lbs. of *artificial guano* cost	2	1	0

The quantity here indicated may be intimately mixed with 100 lbs. of chalk, and will be fully equal in efficacy, I believe, to 4 cwt. of guano, now selling at £5.

For the Farmers' Cabinet.

Forms of Cattle.

Messrs. Editors,—Your correspondent, W. P. H., on page 260, of the present vol. of the Cabinet, asks if some of your readers cannot furnish the most approved anatomical forms of cattle, particularly the milch cow?

Some years ago, I wrote for "The Reporter," a piece on this subject, which was republished in "The Franklin Farmer," of Feb. 1838. As this piece appears to answer your correspondent's request, I shall transcribe a part of it for that purpose, and make such additional remarks as may be suggested. In making the following observations, I acknowledge my obligations to many writers; but none to the gentleman in Indiana, who a few years ago furnished the piece, as published in "The Franklin Farmer," to an agricultural paper of that State, as his own production.

The two principal objects in raising cattle, appear to be *beef* and *milk.* And as certain forms are found to possess particular qualities, I shall proceed to give those forms, and the desirable qualities generally connected with them.

The head should be small—the muzzle fine—the countenance calm—horns fine—neck light, particularly where it joins the head;—breast wide, and projecting well before the legs—shoulders moderately broad at top, and the points well in, so as to leave no hollows behind them when the animal is moderately fat;—the girth behind the shoulders should be deep, so that if the carcass should be cut across here, the section would be an *ellipse*, blunt at both ends;—back straight, wide and flat;—ribs broad, and the space between them and the hips small;—flank full and heavy—belly well kept in—hips globular, wide across and on a level with the back—twist wide, and the seam in the middle of it well filled—thigh straight, tapering well down to the hock;—the legs straight, short jointed, clean, fine boned, and standing wide apart—tail broad towards the top, tapering down small towards the bottom—body long, and joined smoothly to the quarters before and behind—skin soft and elastic—veins large.

I shall now proceed to show the advantages of the above form. The reason why the head should be small and muzzle fine,—a small head facilitates birth; and as the head is composed mostly of bone, it shows fineness of bone, the advantage of which is fully appreciated by the grazier, who has learned that no animal fattens kindly that lacks them. Calmness of countenance also denotes a disposition to be contented, and is generally possessed by a gentle milch cow, and also denotes an animal that will fatten easily. The light neck will be very advantageous to the butcher, who will get much less coarse meat in such; short neck generally denotes a thrifty, hardy animal. A long, or ewe-neck,—that is, one falling off from the top of shoulders—denotes a tender constitution.

The wide breast and deep body, give greater room for the lungs, the importance of which will be seen presently. A straight back is indicative of strength; a weak animal is generally hump-backed; poor keeping will produce these deficiencies in a calf that was at first well formed. The straight back also, denotes aptitude to fatten. Much depends upon the room the lungs have; no animal can be a good one, whose lungs occupy a small space; and as the lungs occupy all the space inside the ribs, so it is important that this space should be large. For this reason, the ribs should spread wide, be deep, and extend well back to the hips. The full, heavy flank of the cow, is a most certain indication of a good milker; this, connected with *large veins*, particularly those on the side of the belly, generally called the *milk veins*, is a certain indication of a good milch cow. The milk is formed from that portion of blood that circulates on the external part of the cow; and as large veins denote a large circulation, so it is indicative of a good milker. The bull with a deep flank, generally produces good milk stock. The belly being nearly straight, shows that the plates of which it is composed are thick and strong;—when the plates are thin, the belly sinks from the weight of its contents. Thick plates are of great advantage to the butcher, when the animal is killed, as it adds much to the weight of meat. Globular hips hold much meat, and it is much easier put upon them, than on those that are sharp. Wide hips give a broader loin and more capacity to the pelvis, which is of much importance in the cow, giving the calf more room. The hind-quarter that is long from the hip to the rump, and straight with the back, will weigh very heavy; and for the same reason, the twist (that is the space between the the thighs) should be wide and well filled up, which gives great weight to the upper part of the thigh. Straight legs are now the fashion, and are said to be stronger than crooked ones. Clean legs, small bones, tapering tails, show fine bones—and such animals are easily kept, and when not in milk, fatten easily. A short legged animal also, is more easily kept and fattened, than long legged ones. When the brisket and twist are large, the legs will be wide apart.

---

* Sulphate of ammonia is now manufactured largely at Glasgow, and may be had for less than 20 shillings a cwt.

I somewhat doubt the propriety of insisting upon a long body; but a good animal with a long body, will weigh much heavier than one with a short body; but it is much easier to breed *good animals with short bodies*. There is a continual tendency in the produce of the long bodied animal to be narrow in the breast, which is not the case with the shorter animal. And as a general rule, the shorter animal fattens much more easily. However, if the width of the carcass can be kept up, a long body is to be preferred. Round bodies were formerly the fashion, but the deep body is now thought to be decidedly best. The limbs do not join to the body of the round animal, as smoothly as to the oval—there generally being a hollow behind the shoulder;—neither is the carcass as heavy. Round animals too, generally carry the fat upon the surface, and do not mix it as well with the flesh. A soft and elastic skin, is one of the most certain tests of an animal that will fatten kindly. An animal may have the finest form and the most perfect symmetry, yet if he lacks the proper "*feeling*," he will not fatten kindly. On the other hand, if he has the proper "*feeling*," he may lack much in form, and still will fatten kindly. By "*feeling*," is meant certain sensations produced by "*touching or handling*" an animal; the easiest learned of which, is the softness and elasticity of the skin. The elasticity is occasioned by the quantity of cellular substance (that is, little elastic bags to hold fat) that is placed between the skin and the flesh. As this cellular substance can be discovered by an experienced "*handler*," even down among the muscles, (lean flesh,) so he can tell whether an animal will fatten in such parts, and whether the fat will be well mixed with the lean. But this knowledge is not to be obtained without much practice.

I have above described the most approved form for cattle, and have given the reasons why this shape is preferred. There is another reason not yet mentioned. When the cow has ceased to give milk, and has been fattened, it will be found that she will not only weigh heavy, but will carry her weight upon the most valuable parts. For it is known, that the butcher sells some pieces of beef for twice as much as others. And she can be fattened upon half the food necessary to fatten an inferior animal.

I have said nothing about the shape of the *udder* and *teats*, as these can be best judged of when the cow is in milk; and then the *best proof is milking her*. Still it may be serviceable to say, the udder should rather be round than long; should lay up close to the body; should spread forward—teats about equally distant, of moderate size, say about two inches in diameter, next the udder, and taper down to the point, which should be blunt rather than sharp: they should be from four to six inches long. The udder, when empty, should be greatly reduced in size, and the skin should contract so as not to leave it flabby;—it should not feel at this time hard and knotty; as this would indicate that it might become thickened and scirrhous, so as to make the cow liable to inflammations, and probably loss of some of the quarters. Samuel D. Martin.

Colbyville, Kentucky, April 3d, 1843.

Mechanics.

Why are wheels generally made of a dished form—that is, inclining outwards?

Because they thus acquire astonishing strength, indeed that of the arch, as contrasted with the flat or upright wheel; the dished form is further useful in this, that when the carriage is on an inclined road, and more of the weight consequently falls upon the wheel of the lower side, the inferior spokes of the wheels become nearly perpendicular, and therefore support the increased weight more safely. The disadvantage of these wheels, however, is, the inclining wheel naturally describing a curved path, the horses, in drawing straight forward, have to overcome this deviating tendency in all the wheels.

Why are the fore-wheels of carriages smaller than the hind-wheels?

Because they facilitate the turning of the carriage. The advantage of the wheel is proportioned to the magnitude; the smaller wheel having to raise a steeper curve. It is not true, however, according to the popular prejudice, that the large hind-wheels of coaches and wagons help to push on the little wheels before them.

From these causes, continues the same ingenious writer, "the difference in performing the same journey of a mile, by a sledge and a wheel-carriage is, that the former rubs over every roughness in the road, and is jolted by every irregularity; the rubbing part of the latter, the axle, glides very slowly over about 30 yards of a smooth oiled surface, in a gently waving line. It is ascertained that the resistance is thus reduced to 1-100 of what it is for a sledge."

Why do springs not only render carriages more easy vehicles on rough roads, but much lessen the pull to the horses?

Because where there is no spring, the whole load must rise with every rising of the road, and must sink with every depression, and the depression costs as much as the rising, because the wheel must be drawn up again from the bottom of it; but in a spring carriage, moving rapidly along, only the parts below the springs are moved, in correspondence with the irregularities, while all above, by the inertia of the matter, have a soft and steady advance.

Again, springs of carriages convert all percussion into mere increase of pressure: that is to say, the collision of two hard bodies is changed by the interposition of one that is elastic, into a mere accession of weight. It is probable, that under certain modifications, springs may be applied with great advantage to the heaviest wagons.

In surmounting obstacles, a carriage with its load being lifted over, the springs allow the wheels to rise, while the weights suspended on them, are scarcely moved from their horizontal level.

Why are "under-springs" so advantageous in very modern carriages?

Because they insulate from the effects of the shocks, all the parts, excepting the wheels and axletrees themselves. When only the body of the carriage is on springs, the horses have still to rattle the heavy frame-work below it, over all irregularities.

Why should a road up a very steep hill, be made to wind or zig-zag all the way?

Because, to reach a given height, the ease of the pull is greater, exactly as the road is made longer.

Why is it important to make roads as level as possible?

Because, a horse drawing on a road where there is a rise of one foot in twenty, is really lifting one-twentieth of the load, as well as overcoming the friction, and other resistance of the carriage.—*Arnott.*

Effects of Salt upon Celery.—Some time ago, we pointed out the beneficial effects of salt in growing asparagus. There is another plant cultivated in gardens, which would be greatly benefited if a little more salt was added to its food—for I believe the manure which it commonly receives, is as wairish to its taste, as brose without salt to a Scotchman. Celery is the plant I mean; I recollect gathering it in a wild state, some years ago, on the north side of the Frith of Forth, in situations that would be watered by spring tides—and, I believe that it is commonly found, both in England and Scotland, in ditches near the sea. This season I gave a considerable quantity of salt to a row of celery, by putting it between the plants some time after they were planted. I then watered them freely, which carried the saline particles down to the roots. This appears to have done the plants much good, for they grew remarkably well afterwards. From the Report of the Covent Garden market, some time ago, it appears that celery this season, has been rather shorter than usual. Some of my plants to which salt was applied, measured, by the middle of September, four feet in height, 30 inches of which were well blanched.—*Gardener's Chronicle.*

Hints for making a Manure.

BY AN AMATEUR FARMER.

We find the following *practical* matter-of-fact article in the Farmer's Register, which credits it to the London Farmer's Magazine.

"The following essay, or rather, we should say, description of a manure, obtained the prize at the last meeting of the Holywood Agricultural Society. As it may be of advantage to farmers and agriculturists generally, we give it the benefit of our circulation."

"*To the President, &c., of the Holywood Agricultural Society.*

"Gentlemen,—Having observed in your published list of premiums for this year, which, by some means fell into my hands, one offered by Mr. Harlin, for the best essay on, or description of, a manure, or manures, which will make the best substitute for that usually prepared in the farm-yard, procured from towns, I thought I would take a chance for it, and resolved, as I have many opportunities of seeing the crops growing, and of conversing with those who grow them, to cast my eyes about, and seek for information on the different manures by which they are produced. I at last fixed upon a farmer's field, where a number of persons had their potato crops planted beside each other. A great difference in the several lots was very perceptible, and my first impression naturally was, as the farmer, the owner of the field, had the largest manure-heap, the produce of many cattle, he should have the best crop. On inquiry, however, I found I was mistaken, for one lot, of a person who kept only one pig, and another belonging to a cottager, who kept no pig, were both better than the general crop. Now, said I to myself, I have the secret to make good manure (and, I must confess, my mind turned more strongly on the premium,) if I can only prevail on this cottager, who keeps no pig, to tell me how he makes *his* manure—what *he* carries on, on a small scale, I will conduct on a large one. He appeared quite astonished on my making inquiry on so simple a matter, as he called it, as a cottager's manure-heap, and thought me very ignorant indeed. However, in a very few words, he told me, that he collected all the green weeds he could, scraped the roads, pared off all the green edges, and cleaned out the *water-tables* opposite his own house, and as much further as he could; and, if his landlord would allow him, *scoured* out a ditch, and even picked up quantities of the *red till*, by times. All these he collected into a heap, and he never allowed a drop of suds, dirty water, house-buckets, or any other liquid that could be collected, to be lost; but poured all on the heap of rubbish he had gathered, and, after some time, turned it carefully, and mixed it properly. On inquiry, I found that he did not apply a greater quantity of this manure to produce his crops, than is usually done from the farm-yard; and he assured me, that its good effects remained in the soil and appeared on the future crops. Now I can fancy the learned essayists, who may compete for this premium, in classic order and in modern style, dividing their subject into different heads, and explaining the meaning of terms, in which I will most certainly fall short! O for the pen, or pencil, of a Franklin, a Cobbett, a Doyle, or a Blacker, to paint my subject in its proper colours, which, though not so beautifully blended as those of the rainbow, yet present to the eye of the amateur agriculturist, a pleasing variety of black and green, diversified with orange and yellow! But you must all have heard, that wishing, of all occupations, is the worst. I must, therefore, as this is only intended for a plain, humble, prosy description, trust to my own style to describe the process, and how followed, for two seasons. You must, therefore, for the present, place yourselves, in imagination, beside a large heap of 80 to 100 loads of road scrapings, water-table scourings, weeds, and every kind of refuse that could be scraped together, with several puncheons of suds, and all other sorts of liquid manure which are produced about a farm-house (with some more solid,) discharged into numerous communicating cuts, made over and through the surface of the above described heap, the liquid being always immediately covered over, to prevent evaporation. The cuts must be made in different parts of the surface of the heap, for each successive puncheon of liquid, till all is completely saturated; then an additional layer of earth and other material, and so on, till it is ready for a complete turning. Or, suppose a pit dug in a convenient part of a field, or a tank made near your house, both of which I have tried, with a layer of finely broken earth in the bottom, on which a puncheon of the material before described, has been discharged, the whole properly mixed together with a shovel, the operator standing on the brink of the pit or tank; and afterwards, a thin layer of earth added, to prevent evaporation. In another week, or as often as possible, add another layer of finely broken earth, and another puncheon, mixed and covered over as before directed, till your pit or tank is full, and ready to be cleared out, to give room for another '*making.*' When the material is thrown out of the pit, it will be always necessary and proper to cover it entirely over with weeds, or some kind of refuse; but the more vegetable matter, the better. This matter, however, is not one for supposition; it has been carried into effect, and could not be kept a secret; for the process drew wondering spectators, from its perfuming the air with that rich odor which would make a knowing agriculturist look six months before him, and say to himself,—This will come to something; if crops don't grow after the application of this manure * * *. I have heard of, and seen essays which would tell you what might be done; but here is a matter on which you may exercise nearly all your senses—you can see it, touch it—most certainly smell it; and, at any stage of the process, you may readily hear it. I will not detain you with the obstacles I had to encounter in carrying that great matter into effect, being laughed at by some, and ridiculed by others. But, before concluding, just observe (that this manure may have fair play,) your ground must be first well drained—different manures are adapted to different soils and different plants—and that a long continuation of the same manure to the same soil is often injudicious. I had almost forgotten to remark, that I have known many farmers to draw manure, at a dear rate, from towns, who were allowing much liquid manure, for want of a very trifling arrangement on their premises, to 'waste its richness on the desert air.' This is a subject which demands your early and attentive consideration; and I would warn you not to be too long about it, as one farmer of this parish has certainly done, who said he had been thinking about making a tank for nine or ten years, but could never get time. If this humble description of manure should happen to obtain the premium, it may be handed to your secretary, who will, if necessary, tell the name of the writer, who has adopted, as his motto,

"Keep your eyes open."

From the Farmer's Register.

Bone Dust.

Sandy-spring, Md., Third mo., 1843.

To the Editor,—In my last I promised to furnish an account of further experiments in the use of bone manure, and have accordingly seated myself to fulfil my promise.

Owing to the tardiness with which the spring opens, an experiment that I have now in progress, of applying it in the fall as a top-dressing for wheat, is not sufficiently developed to warrant any conclusive deductions in its favour; but, from one tried last year, I am inclined to the opinion that it is a most powerful stimulant when applied in the spring. In my wheat ground there was a miserable white flint knoll, upon which the sowing of 20 bushels per acre, failed to more than vegetate the plant; consequently, in the spring it was a perfect eye-sore. I doubled the quantity, making it at the rate of 40 bushels. The wheat soon outstripped that which surrounded it; and it is now better set with clover than any portion of the field. It is my intention to try another experiment of the same kind this spring, although, to insure its permanency, I would prefer sowing it in the fall, and, by a light harrowing, incorporating it with the surface.

At the chemical laboratory in Baltimore, bone dust can be purchased at fifty-two and a half cents a bushel, well secured in two-bushel bags, and weighing 60 pounds to the bushel. It is easy, therefore, to calculate what it will cost on our farms.

It was with grief that a paragraph in a newspaper lately met my eye, announcing the fact, that a large quantity of bone was exported from one of our northern cities to England, where its value is known, one of whose writers, Johnston, in his Agricultural Chemistry, analyzes a ton of dry bones, and gives the following as the result.

"Dry bones contain about two-thirds of their weight of earthy matter, the other third consisting chiefly of animal matter, resembling glue. Thus a ton of bone dust will contain

Animal matter, - - - - -	746 lbs.
Phosphate of lime, - - -	1245 "
Carbonate of lime, - - -	249 "
	2240 lbs."

And again, "The farmer now rejoices in having in one ton of bone an equivalent to 14 tons of barn-yard manure." While such is their knowledge and belief, need we wonder that our bones serve to enrich a foreign soil? My object, and the only one I have in view, is to urge agriculturists to experiment with this valuable manure, feeling well assured that it will be followed by extensive use, and that ere long, every city and town will have within its limits an establishment for grinding, instead of leaving them to bleach and waste away upon their commons.

Richard T. Bentley.

Take things always by their smooth handle.

Extraordinary sales of Cattle, &c.

The following letter from our fellow townsman, we clip from the New Genessee Farmer.

Mr. Henry Colman,—

Dear Sir,—I am about to fulfil my promise made to you when in this city a few weeks ago, by giving you a statement of some sales made by me, of cattle and sheep. Some of the former were of improved breeds, the latter were of the Leicester or Dishly breed, of which I kept a flock, from 20 to 60 head, for some years previous to my leaving my farm.

In the year 1815, I sold 20 oxen fatted on grass during one season, for $90 per head, making $1,800. The above cattle were raised in the State of New York. In March, 1816, I sold two steers six years old, for 25 cents per pound, net beef. They weighed $1773\frac{3}{4}$ pounds, and $1653\frac{1}{2}$ pounds, making together $3,427\frac{1}{4}$ pounds, amounting to $856, 75. They cost me $160. I kept them about seventeen months, during which time I fed them with corn meal mixed with oat meal, and wheat ship-stuff, turnips, &c.,—grass in summer. In the autumn of 1816, I sold 20 oxen at $100 each. These and the others above, were raised in the State of New York—the latter had one summer's feeding on grass, and weighed 1000 pounds each.

The spring of 1817, I sold 10 oxen that I fed during the winter on corn and oat meal, and were in good condition when I purchased them—for $130 each. In December, 1817, I sold 13 cattle to go to the New York market, for $1400. They had been fatted from one to two years, and were raised in Western Virginia.

In April, 1818, I sold four steers for $646, 68. Three of them were raised in Kentucky, and weighed from 13 to 1500 pounds each. About the same time, I sold to the navy agent in Philadelphia, a yoke of oxen for $175. They were the first oxen ever used in that yard. They purchased them at my recommendation, and have never used a horse there since.

March, 1819, I sold a five year old steer, for $336. I had fed him about eighteen months, he weighed near 1400 pounds, net beef. This steer was raised by a neighbour of mine, and was remarkable for his beauty of form and fatting qualities; I paid for him $160—he was of the native breed. At the time I left my farm, I had made some progress in Short-horned blood, and have sold half-breed heifers, as high as $100.

I had, during seven years previous to 1824, sold many of my Leicester sheep at high prices to breeders—as high as 30 to 75 dollars each—to butchers, from 10 to 27 dollars each. My sheep always afforded me great pleasure and profit; their docile habits and beautiful forms were always interesting.

During the time of the above transactions, I was largely engaged in the grazing business, on the fine meadow lands on the river Delaware, south of this city, for which I paid from seven to ten dollars per acre, rent. I had also high land, where I raised and kept my stock during winter.

I have thus given you a hasty sketch of some of my operations, merely for your own satisfaction; and if productive of any gratification to you, I shall be quite satisfied.

I hope to hear from you before you leave for England.—

And am most respectfully yours,
Aaron Clement.

Philad., March 2, 1843.

Pruning fruit trees.—It will be found upon experiment, that a wound made on a tree in March or April, will look black as soon as the sap begins to flow, and that the sap will ooze out until the leaves have put out so as to receive it; while a wound made in June, will remain white, and immediately commence healing. The wound of a tree that has been broken by being loaded with fruit, or otherwise, while the tree is green with foliage, will look white and the wood remain sound; while one broken in the winter, by snow, or from other cause, will look black and incline to decay.

It has been my humble lot to spend most of my time in the spring and fore part of the summer, in engrafting and pruning fruit trees, and my experience goes to prove that the best time for pruning, is when the leaves are full grown, and the tree is in a vigorous and growing state. For at this season, when the sap has been spent in the foliage, and the pores of the wood are filled, so that when the limb is taken off, the sun and warm weather will dry the end of the limb and close the pores of the wood against the weather, the sap will keep the limb alive to the very end, and the healing will be perceived immediately.—*Boston Cultivator.*

Ploughing in green crops.—Living plants contain in their substance not only all they have drawn up from the soil, but also a great part of what they have drawn down from the air. Plough in these living plants, and you necessarily add to the soil more than was taken from it—in other words, you make it richer in *organic* matter. Repeat the process with a second crop, and it becomes richer still—and it would be difficult to define the limit beyond which the precess could no further be carried.—*Johnston's Lectures on Agricultural Chemistry.*

Husbandry.

By Dr. Hirzel.

"The pleasure arising from the study of husbandry, is now confirmed in me, since it is become a part of my duty to examine the nature of soils; and the appointment of first physician to the republic of Zurich, making it encumbent on me to watch over the health of her citizens, I am obliged to pay particular attention to the different modes of living among the different ranks of people—the consideration of a remedy for epidemical distempers among cattle also, being strongly recommended to my care, some knowledge of agriculture seemed a necessary preliminary to such an office, as it almost always happens that the *origin of these epidemical distempers springs from the meadow and pasture land;* the rules inserted in our memorials for preventing epidemical diseases in cattle, by *correcting the insalubrity of the soil,* furnishing proof of what I advance. This double motive inspired me with an ardent desire of exploring and explaining, with all possible precision, the present state of rural economy practised amongst us, with its imperfections and capability of improvement. And I must acknowledge, that the methods hitherto pursued, do not appear to me the best calculated to answer the purpose in farming. An eager pursuit after new experiments, prevails amongst those whose knowledge of the ancient husbandry is superficial and incompetent, and some there are, who flatter themselves with being considered the greatest improvers of agriculture, from the introduction of some unknown species of grain or artificial grass; while others expect fame from the invention of some new implement or different mode of tillage; while a third sort hope to acquire it by untried objects of attention. Now, in opposition to all this, I apprehend the first principle we ought to set out upon is, a perfect knowledge of the nature of soils, with a competent insight into such methods of cultivation as are practised by the most intelligent and industrious farmers, by which they often double their produce, when compared with their nearest neighbours. What remains therefore, is, to procure a free communication of these methods, and to endeavour by all possible means, to excite a laudable emulation amongst farmers: this, I should think the most eligible plan for restoring agriculture amongst us: the most circumscribed genius may follow practical rules unmolested by any obstacle, whilst new inventions are attended with a crowd of difficulties. But I have no desire to depreciate the merit of those generous citizens, who have appropriated a considerable part of the superfluity of their income to the procuring of newly invented implements of husbandry, and several sorts of grain and grass seeds, trees and shrubs unknown in our climate, of which they have made trial on their own estates, before they were rendered public; these spirited attentions, of whose good effects we have already reaped much advantage, undoubtedly merit our commendation and acknowledgment; yet this plan for the improvement of agriculture, appears more uncertain and slower in its progress, than that which I have ventured to recommend; it is more *uncertain*, because men are too apt to embellish a favourite theory in their writings: the objects of which they are fond, are often extolled beyond reality, and they allow too much to fancy in their descriptions. It must be a long course of experiments, which alone can determine whether this or that grain or grass, may be naturalized with real benefit to a country, or whether the adoption of a new system of husbandry, with its attendant expense, be an advantageous compensation for abandoning an old one. Experiments often succeed to admiration, in a well cultivated garden, but when extended, the utility is found absorbed in the expense of labour. I have also observed that new inventions are always slow in their effects, and can be of no real benefit until they become habitual or general: it is a work of time to convince a cultivator that the alterations you propose are eligible, and to persuade him to renounce his prejudices, and change the habits received from his forefathers, for new ones."

Improvement in the construction of ploughs.—A Scotch writer observes: "twenty-five years ago, it was common to see four horses and four oxen, dragging and staggering before a large heavy plough, carrying a very small furrow, at the rate of about a mile an hour, whilst the driver—the only active member of the cavalcade—was obliged to traverse three miles to their one, to prevent them from falling asleep! Now, we see no plough with more than a pair of horses, carrying a furrow twice the weight, and going with apparent ease three times faster; while the horses are better bred, in better order, and maintained at less expense." Horses, in this part of the country—West Lothian—have now quite superseded oxen in husbandry work.

That life is long which answers life's great ends.

From the American Agriculturist.

City Manures.

Glass is a silicate of potash or soda, which enters into the composition of all grasses, straw, grain, and corn, forming a fraction of the solid portion of probably all vegetation. Silicate of potash and of soda, is silicious and chemically combined with those alkalies; that is, such sand as is commonly found on our sea-beach. Wheat contains a larger portion of silicate than any other grain; and if sown on land totally exhausted of this material, no wheat will be produced, however rich the soil may be in other fertilizers. When sown on land mostly exhausted of silicate, the crop will be small and the grain light in weight.

To apply glass to land, it should be ground as fine as flour. I have sold about 25 barrels of it to our farmers within the last six months, and the coming crops will test its value. The price charged, has been $1 75 per barrel, the barrel included; and when our farmers know that each barrel contains more than three hundred pounds, and that in this quantity there are from one hundred and five, to one hundred and twenty pounds of potash or soda, they will know it to be one of the cheapest fertilizers they can purchase, independent of any effect from the silex dissolved in it. It is purchasing pure potash or soda, at less than one cent and three-quarters per pound. I should consider one barrel per acre, to be an ample supply for two years' crops.

Many hundreds of tons of broken glass, are thrown away in New York and Brooklyn annually; and as every hundred tons contains from 35 to 40 tons of alkali, our Long Island and Jersey farmers may judge how much they lose by not employing it on their land.

I shall now call your attention to the plaster of Paris thrown away in New York. Such an assertion will no doubt surprise many a farmer who uses plaster; yet it is true, that scores of tons of the purest of plaster have been annually thrown away in our city. I last summer had carted away 21 barrels of it to put into a compost heap at Gravesend. In making soda water, they use carbonate of lime, from which they separate the carbonic gas to saturate the water contained in their fountains. To do this, they have to use sulphuric acid; this combines with the lime, separating it from, and liberating its carbonic gas, and the residuum thrown away, is the purest of plaster. Such plaster will be moist, yet sufficiently solid to cart away in flour barrels. Let those farmers who find plaster beneficial to their land, attend to this source of supply.

I shall now call your attention to the dock mud taken out of our docks by dredging machines. I was quite astonished the other day, to learn that this material was landed in scows, then warped to the tide current, and *there thrown into the river!* This is probably one of the most valuable fertilizers we have in the country, and the quantity is immense. It contains the whole wash of the city; and after a rain-storm, the most valuable portion of our street dirt settles in the docks. Chamber-lie, soap-suds, soap-lees, fish-offal, blood, pot-liquor, &c., &c., are the greater portion of them collected in the dock-mud. The very smell from the docks when foul, or the tide is low, is a pungent proof of its fertilizing power.

This material should be collected in some convenient spot where it can be landed, put into heaps under open sheds, mixed with lime, plaster, or charcoal, and let lie until a thorough decomposition takes place, and then applied to the land. There can be no doubt that one cart load from such a compost heap, would be more valuable to the farmer than three loads of the best street dirt.

It has been objected by some, that dock-mud contains salt. This, instead of being an objection, will be found to be one of its most valuable properties. The celebrated guano manure, taken to Europe from islands in the Pacific ocean, and selling there at $2 33 per 112 lbs., contains more than 30 per cent. of sea salt, a larger portion probably than would be found in our dock-mud. I should consider that a compost made from our dock-mud would be very little, if any, inferior to the guano manure.

Wm. Partridge.

New York.

For the Farmers' Cabinet.

Comparative advantages of Farming.

It is a prevalent opinion amongst young men—those who are engaged in agriculture, as well as many who are connected with commerce, that farming is less advantageous, and subject to greater hardships, than most other professions—but this arises, in a great measure, from partial views of the subject, and from an unacquaintedness, incident to the employments of others: they therefore form opinions merely from external appearances, without investigating the disadvantages attendant upon other occupations—and thus, enterprises are commenced and precipitate resolutions are formed, which lay the foundation of many disasters, which daily take place in families and amongst individuals. But the farmer possesses many advantages which these persons are apt to underrate. And first, his moral honesty is not so hardly tried, as it would be in many other kinds of business; and consequently, "defalcation" is not often charged upon him. Again, he has no knowledge of that competition which exists between those of other trades and professions; so that when he retires from his labour, he is free from those inward ranklings, which often harrow up the minds of persons engaged in trade. Nor is he in that danger of losing his property by casualties—fire, the winds and waves, and the depredations of dishonest men: and as he raises those articles upon his farm that are most necessary for his comfort, and which have always been considered cash articles in the market, he is not so liable to be put to his wits' end to procure money to purchase the necessaries of life. It has been objected, that farming is a laborious and dirty employment; but is there not hard and dirty work in the shop of the blacksmith? and do not the carpenter and mason encounter both, in the repairs of old buildings, &c.? and are the grocer, the warehouseman, the harness-maker, and the shoemaker exempt? Another objection is, it is a slow way to get money; true, there are shorter ways to make money, but it very often happens that those who accumulate property the quickest, cannot produce such a title to their wealth as will procure satisfaction and a quiet conscience. Multitudes, deluded by the deceptive allurements of trade, have entered into ruinous speculations, to the destruction of their own prospects and the peace and happiness of their families; stamping lasting blight upon their characters and future welfare, and all to gratify an insatiable appetite to make money quickly; overlooking the fact, that generally, the fortunes that have been made the most suddenly, are the most suddenly dissipated, and that those who enjoy the privilege of making money fast, have often to pay dearly for it, both in their persons and characters, and are made to exclaim, "all is not gold that glitters." Few know or consider, the *personal assiduity*, the economy, the self-denial and perseverance which are necessary to insure success in trade: there is no occupation exempt from its peculiar evils and trials—the physician, the lawyer and the clergyman, have their full share, of which the farmer is little aware; and if he could comprehend all the difficulties and unpleasant occurrences, which even these are continually liable to encounter, he would rejoice at his lot, rather than envy that of others; and bless his "lines that have fallen to him in such pleasant places," and be grateful for his "goodly heritage." S. Brown.

Wilmington, Mass.

Variation of Crops.

It is a remark of practical men, that the land is *fresh* to such a crop, not having grown the same species for some years before; thus accounting for its flourishing appearance. To the question, what takes place in the soil during the growth of any particular vegetable? the reply is, that a fermentation, with the extraction of certain proportions of the materials of a decomposable nature contained within the soil, is effected during the process of vegetation, and in a manner *peculiar to the species grown.* Then, if the same grain or vegetable be sown the following year, the same precise fermentation and proportions must necessarily take place, and be required for the unfolding and perfecting of the same plant, and of course, so continue to be the case for any number of years afterwards. And what then must be the tendency of such a practice? why a rapid approximation to poverty and barrenness. In this view we are supported, most completely, by facts; for we see, in the space of a few years, that the land which is continued to be sown with the same species of grain, will produce next to nothing, save the weeds, which are indigenous to the soil and circumstances; and if manure be added under the idea of improving the grain, the weeds will still be the chief gainers, and flourish with proportioned vigor, and only choking the grain the sooner. It is true, that certain soils will bear a repetition of one kind of crop longer than others, according to their constitution; but in general, two good crops of the same species in succession, are rarely obtained from the same land; but let the land be cropped by a different species every year, for a few years together, and the fermentation with the extracted proportions, will then be varied according to the degrees of difference and peculiarities of the description sown; and these degrees of difference are denoted by the peculiar marks of vigor of the growing plants. By adopting this practice, instead of growing one productive crop only, a succession of two, three, four, or even more, may be obtained, to complete a series proportionate to the judiciousness of the selected variety and the soil; after which, the recurrence of the succession may take place with profit, and by proper cultivation conjoined with manuring, be continued forever, with the land improving. The advantages gained by the introduction of a variety in succeeding crops, appears to be owing, in the first place, to some of the species rooting deep; others superficial; others diagonal, and so on; by which means every part of the cultivated soil becomes investigated by their fibres. In the second place, one plant may require a large proportion of oxygen, another of hydrogen, a third of carbon, and the like, to re-collect each of which, for the healthy maintenance of each respective plant, requires an interval of two, three, four, or more years, according, of course, to circumstances. And supposing the interval of any species of grain be passed over for a time, the result to be anticipated in the future crop of the same species, is—provided the land be kept in a high state of cultivation all the while—that the vegetation of the plants will prove conspicuously fine and vigorous, and at harvest exceed the former crop of the same species, either in grain or straw, or both. Relative to the truth of all the above particulars, it is only necessary to attend to the analyzed products of a few species of vegetables, and we find a difference in the proportion of the materials of which they are composed, which passing through their peculiar organization, causes that characteristic feature—their variety.

Experience has, a thousand times, confirmed the necessity of a variation in the succeeding crops, to a certain extent; consequently, the best judgment of an agriculturist is required to select those useful species which will follow each other most successfully; to ascertain also, the necessary interval of time of each respectively, before a repetition of the same course can take place, to ensure on an average of years, the greatest permanent produce at the least expense. A person first entering on a farm, may not be well acquainted with its constitution; therefore, the benefit of a few years' experience must be had, before the nature and properties of soil and circumstances can be fully known, and a permanent profitable produce gained.

Similies are great *elucidators*—the recourse to them will therefore assist in explaining more clearly, some parts of the reasoning which has here been employed. Let then, a piece of fresh-burnt lime have a little water poured on it; a chemical process commences, which exhibits itself by the lump of lime breaking to pieces, the vanishing of the water accompanied with the evolution of heat and steam—and then all is quiet; but a little more water being thrown on, the same process and result ensue, which may be repeated till the whole mass is saturated with water, and converted into the hydrate of lime, when, the balance of affinities being established, no further decomposition and evolution of heat will take place, whatever quantity of water may be afterwards applied. This hydrate of lime may be dissolved, and with the addition of sand, form mortar, or be mechanically suspended in a body of water; but the same recurrence of phenomena is impossible, until the hydrate has been exposed to the fire of a furnace to re-expel the water; when the same appearances will be visible on a second application of water. But let the hydrate of lime be exposed to the influence of carbonic acid, and the hydrate will in due time become the carbonate of lime; for this acid, having a stronger affinity for lime than water, expels the water and combines with the lime; and during this change, a different fermentation goes on from the former, and continues until the lime is saturated with the acid, when all is quiet again. Now let a third substance be applied to this carbonate of lime, as the muriatic acid, which has a stronger affinity for lime than the carbonic acid, and this acid will, in its turn, dislodge the carbonic acid, by a strong and rapid effervescence, until the balance of affinities is once more established, and the *carbonate* changed to the *muriate* of lime, when no further addition of the same acid will have effect. Suppose, however, the sulphuric acid be next employed, which, from its superior power over the muriatic, will take place of the same; the *sulphate* of lime will then be formed. And then, having gone through this series of changes, if the furnace be again had recourse to, the lime may be once more obtained pure, and all the before mentioned phenomena, like a course of crops, can be practised and seen a second, a third or fourth time, or as often as may be desired.—*Bland's Agriculture.*

For the Farmers' Cabinet.

Summer Soiling.

Messrs. Editors,—Your intelligent correspondent, Mr. B. Webb, of Wilmington, Delaware, is preparing to put the summer soiling of cattle to the test of experiment; his intention being, to soil his dairy cows on cut clover, grass, green oats, corn sown broadcast, &c., during the whole of the season, and to note the result; and in the hands of such an experienced cultivator of the soil, we may be assured that justice will be done, and a true account rendered, whether for. or against. With this view, he is removing away a great portion of the internal fencing of his farm, which being post-and-rail, on a close and retentive subsoil, has entailed great expense and labour in the article of repair, and will soon require a total renewal.

Now, I too am a strong advocate for summer soiling, and from the little information which I have been able to collect, have no doubt of its being a profitable, economical, and by no means a troublesome system; but I would ask my soiling friends, how do they intend to supply their dairy cows with green food, before the crops are sufficiently advanced in growth to afford a cut for the scythe? or do they contemplate to keep their milking stock in the yard, and continue to feed on hay and grain after there is a *bite* in the fields, and until the time of mowing? if so, this is by no means an encouraging feature in the plan, for a couple of weeks of early grass to the future welfare of the dairy, after being confined the whole winter in the yard, will not easily be overrated; so necessary is it to get the cows into good heart and condition as early as possible in the spring, or the summer will be too short from whence to reap much profit by their milk; and of this, I have, unfortunately, ocular demonstration, for my neighbour Jameson's cows, are but just able to pick up during the summer, what they have lost the preceding winter—leave alone the business of the dairy—and the business of the straw-yard is commenced, under a condition of *keep*, that scarce deserves the name.

But I have gathered from the Cabinet and elsewhere, that the people of the island of Jersey—from whence come the Alderney breed of cattle, which seem about to have a *turn* in the estimation of our dairymen, are accustomed to tether their live stock, horses, cattle, and even sheep on their young grass; and it is confidently asserted, that this system is the most economical that can be devised, although it is admitted that much care and attention are requisite; for, as only about two feet space of pasture is given to the animal at once, it would be necessary to remove it often; the tether being either a rope or chain, made fast to an iron plug, round which is placed a swivel, which is driven securely into the earth. Each remove, therefore, gives a semi-circular sweep of fresh grass, about two feet in width, upon which the animal is prevented from treading, by being kept back by the rope or chain; and thus the whole of the herbage is fed clean off, and closer than it could be mown. It is customary to make fast the chain or rope to the *foot* of the horse and the *horns* of cattle, care being taken to fix the rope on the latter, so that it does not draw tight by a slip-knot, which would injure the root of the horn.

Now could not this plan be adopted until the crops become sufficient in growth to permit the use of the scythe? this would be in the cool part of spring; when the weather becomes hot, soiling in the stable would no doubt be preferable. But I hear some one exclaim, "It won't pay, my dear sir;" to which I reply, the plan might as well be tried before it is condemned; and I have yet to learn why it is, that every business except agriculture, will pay the expense of good management. It is granted, that a degree of care and attention is requisite; but if a man is paid for his labour, what more ought to be expected? and two or three weeks of early green food in the spring, would be sure to do that, and leave a profit in the future well-being of the dairy.

I understand that Mr. Webb is cultivating potatoes the present season, upon Col. Barnum's plan, laying on a double quantity of manure at two separate times, literally hilling up the sets, placed at two feet distance each way, with dung. His friends and neighbours will be much indebted to him for the benefit of the experiment, and may he reap a rich return for his labour: such experiments are of incalculable value to a whole country. His son, Mr. William Webb, is now engaged planting corn for another experiment, in the making of sugar from the stalk: such untiring zeal in a cause fraught with so much importance to his country's welfare, ought to be crowned with success—may he live to experience it, and receive the reward so justly his due.

Vir.

May 18th, 1843.

Effects of culture.—The almond, with its tough coriaceous husk, has been changed by long culture into the peach, with its beautiful, soft, and delicious pulp; the acrid sloe, into the luscious plum; and the harsh, bitter crab, into the golden pippin. Attention to nutrition, has produced quite as marked changes in the pear, cherry, and other fruit trees; many of which have not only been altered in their qualities and appearance, but even in their habits. Celery, so agreeable to most palates, is a modification of the *apium graveolens*, the taste of which is so acrid and bitter that it cannot be eaten. Our cauliflowers and cabbages, which weigh many pounds, are largely developed coleworts, that grow wild on the sea-shore, and do not weigh more than half an ounce each. The rose has been produced, by cultivation, from the common wild briar. Many plants may be modified with advantage by suppressing the growth of one part, which causes increased development of the other parts.

Irrigation,--Drainage.

Editors of Farmers' Cabinet,—As you were pleased to give room in your April number, to a short article on Irrigation, I have inferred that you judge the matter of sufficient importance to claim the attention of your readers. Perhaps they, like myself, may be willing to look a little further into it, and the kindred subject of drainage. I have accordingly gleaned some extracts from the January number of the Westminster Review, which, with the accompanying remarks, I offer for your columns.

We are aware that the draining of vast bodies of lands in Great Britain, is frequently a matter of so much importance, as to become one of Parliamentary interference. The powers of the steam engine are there called in, and the multiplication of under drains with tiles, is often submitted to, for the purpose of draining their wet lands, at an expense per acre, that would frighten the American agriculturist. Yet in many of these instances, we find the enterprising undertakers declaring, that the results have afforded most profitable investments for capital. Not only is private interest to be regarded in justification of the expense, but we should keep in view the fact, that "every step towards improvement, is an advance in reduction of the existing burdens" of the people at large. Agricultural writers in England, are quite of the opinion, that while the population of that country is increasing 14 or 16 per cent. every ten years, the growth of wheat—the most important of her crops—may readily be increased in a still greater ratio, by a general system of drainage, and the necessary attention to irrigation. Indeed, by passing the rich sediments of their streams over their fields, fertility may be increased beyond any thing it is easy to calculate. We speak more particularly of the results of these measures in Great Britain, because it is an English article on these subjects, that we set out with noticing: we are, however, inclined to believe, that the enterprizing American farmer, may learn much to aid him in bringing into profitable use, many of his now worthless acres. Lord Stanley stated at Liverpool, in 1841, "that there was no bank in the whole country—no commercial speculation—no investment so safe, so sure, so profitable, as that in which even borrowed capital may be engaged, by investing it under the ground of your own soil." To carry out a complete measure of under drainage for the whole of the wet lands of Great Britain, different estimates have been made of the capital that would be required, varying from £85,000,000 to £150,000,000 sterling! And yet it is confidently asserted, that the result would justify the expenditure of so large a sum.

"The benefit of irrigation," say the commissioners for the drainage of the bogs of Ireland, "is necessarily connected with an effectual drainage." And "what valuable matter," says the Westminster Review, "is abstracted from the land, by various rivers of the different continents! Hartsoeker computed the Rhine to contain in suspension one part mud, to ninety-nine parts water. Sir George Staunton states, the Yellow river to contain one part in two hundred. The alluvial soil deposited by the waters of the Nile, is 14,784,000 solid feet per hour. The Mississippi deposits 8,000,000 solid feet per hour, and the Koangho, according to Barrow, carries hourly into the sea, 2,000,000 solid feet of sediment. Major Rennell considers the Ganges to contain of sediment, one part in four;* and says, no wonder then, that the subsiding waters should quickly form a stratum of earth, or that the delta should encroach on the sea. Mr. Everett calculates the annual discharge of sediment from the same river, at 6,368,077,440 cubic feet."

It has been calculated, that the proportion of impurities to the volume of the water of the Thames, is about as one to ten thousand. If, however, the surface-cleansing of the streets, were added to the ordinary mass of impurity, the proportion held in suspension, would probably be about double that just mentioned. Of what incalculable importance then, must it be to the productiveness of the countries through which these rivers pass, to be able to throw the rich matter which they hold in suspension, over their lands.† "The testimony of Mr. Stephens," says the Review, "goes to show that the winter time is the most proper for irrigation. The water should be allowed to run through the whole of October, November, December and January." It has been estimated that in England and Wales, there are 10,000,000 of acres of cultivated lands, that require draining; and an equal quantity of waste lands, from which the water might be drained by a general measure. If the water thus acquired by draining from 20,000,000 of acres, were properly disposed of, and applied to machinery to the best advantage, calculations have been made, showing that the gross amount of this power, would be superior to that of a million of horses. One can scarcely calculate the saving to the coal fields of England, which the now unappropriated water power, equal to 1,000,000 of horses, would produce. And this is a subject of great magnitude to that country;—some of her first geologists are of the opinion, that the coal beds, broad and liberally distributed as they are, are yet by no means inexhaustible. "Mr. Boulton," says the Review, "at a meeting convened to take measures for erecting a monument to the memory of the late James Watt, is related to have said, that the establishment to which Mr. Watt belonged, had produced steam engines equal to the power of 100,000 horses, and that this was a national saving, to the extent of £2, 500,000, annually. It appears from this, that Mr. Boulton estimates the advantage of steam power, over that of animal power, at £25 each horse." In estimating the value of water power, its inexhaustible nature may be considered its first recommendation. The benefits to be derived from irrigation—both by a judicious appropriation of the natural streams, and by advantageously using the surplusage of rain water,* are incalculable in themselves, and their sources inexhaustible. Every year is diminishing the quantity, and increasing the demand for coal. The call is for steam—steam! The wonders which it is daily performing by the aid of science, accustom us to look to it for every thing, and to overlook, in some measure, the value of water power. The farmer even, if we may judge from an article in your last number, is dreaming of his steam plough; and why should he not so dream, when steam has enabled him to buy a shirt for three or four cents a yard, and he sees the printer forego the strong pull that was formerly indispensable, and with astonishing rapidity, send abroad for a dime or two, a volume that would have cost our fathers as many dollars. Still, it may be well to remember what Dr. Buckland has more than once taken pains to impress the public mind in England with—that there is sound policy in husbanding the coal.

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* We cannot help suspecting there must be a misprint of the Major's estimate.—Ed.

† Johnston says in his Elements of Agricultural Chemistry, "The very fertile alluvial soil of East Friesland, formerly overflowed by the sea, but for sixty years cultivated with corn and pulse crops, without manure, has been analyzed, and found to contain ten per cent. of organic matter."

"Water," says the Westminster Review, "is a natural power, constant and inexpensive, because it may be applied where it is procured, and if not used, would be lost. Therefore we do not hesitate to say, that it is two-thirds cheaper than steam, and four-fifths cheaper than horse power:" and suffer me to add in conclusion, that its value for irrigation, is not appreciated in the United States. Z. Y.

For the Farmers' Cabinet.

The Universal Corn crop.

Universal indeed! and yet there are still features in its character that have not been sufficiently, if at all noticed by us. One of these is, the great difference in the cost of seed for planting, when compared with that of wheat, amounting to about a rent of the land at the first start: for while the two bushels and a half per acre of seed-wheat, cannot be valued at less than three dollars, or perhaps four, the seed-corn necessary for an acre of land, is so insignificant in cost, that no one, scarcely, ever counts upon it. And then at the time of harvest, the difference is still greater; for while the corn will stand to ripen without the loss of a single grain by shaking out, the britting of the wheat crop and loss by scattering, at the time of cutting, cannot be counted less than about the seed sown, and oftentimes double that quantity. Here then, are six or seven bushels of wheat to be put to the account of seed-grain and loss at harvest—an ample profit per acre, on the corn crop to begin with, to say nothing of the greater increase of crop, as might in all cases be calculated upon, if justice be done in the working. It is admitted, that this after-working is laborious and expensive; but one half the cost should be transferred to the succeeding crops, which are benefited by this admirable system of fallowing, fully to that amount. In short, any how you can fix it, there is *nothing like corn*—how far it would be expedient to substitute its culture for that of roots, is another and interesting question for future discussion. M.

Lancaster co., Pa.

Cause of rain.—The theory propounded by Dr. Hutton, that rain occurs from the mingling together of great beds of air of unequal temperatures, differently stored with moisture, is that which was adopted by Dalton, Leslie, and others, and is the current one, having been illustrated and strengthened by the clearer views of the nature of deposition which we now possess.—*Book of the Farm.*

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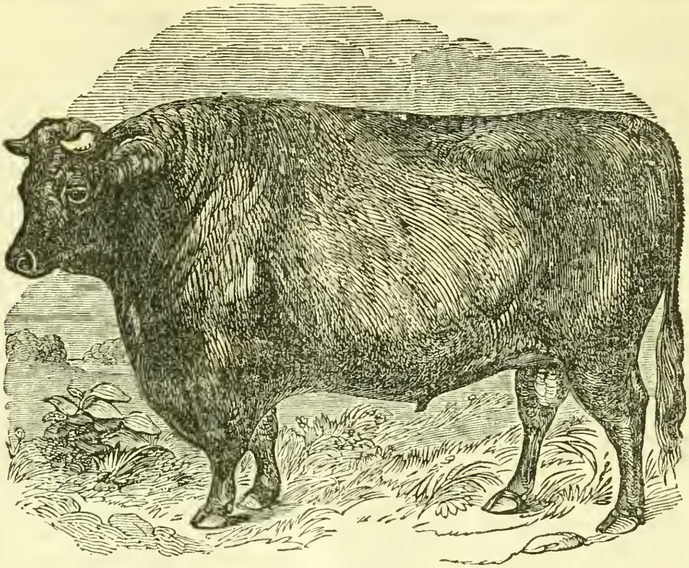
* The average fall of rain annually in England, is according to Dr. Dalton, 31¾ inches. In London, the average for the last 40 years, has been about 20½ inches. It is greater as we go north. In Westmoreland and Lancashire, it ranges from 40 to 70 inches. In this city, the average for the last 33 years, was about 38½ inches.—See Farmers' Cabinet, page 200, of the current volume.—Ed.



A BULL

Of the improved Teeswater breed, the property of the Rev. Henry Berry.

From the earliest periods as to which we have any account of the different breeds of cattle, the counties of Durham and York have been celebrated for their Short-horns; but principally, in the first instance, on account of their reputation as extraordinary milkers. To recite their recorded feats at the pail, would be to invite incredulity, but it may be asserted on the best evidence, that taken as a breed, they have never, in this particular, been equalled. But the cattle so distinguished, were very different from the improved Teeswater race; for they were generally of large size, thin skinned, sleek-haired, bad handlers, rather delicate in constitution, coarse in the offal, and strikingly defective in the substance of girth in the fore-quarters. As milkers, they were most excellent, but when put to fatten, as the foregoing description will indicate, were found slow feeders, producing an inferior quality of meat, not marbled or mixed as to fat and lean; and in some cases, the latter was found of a particularly dark hue. A period of about an hundred years has elapsed, since the Short-horns on the banks of the river Tees—hence called the Teeswater breed—had assumed a very different character from that contained in the foregoing description: in colour, they resembled the improved Short-horns, being occasionally red, red and white, and roan, although the last named colour was not so prevalent as now: they possessed a fine mellow skin and flesh, good hair and light offal, particularly wide carcasses, and fore-quarters of extraordinary depth and capacity. Perhaps no closer modern resemblance can be found to the above description of the improved Teeswater breed, than the Rev. Mr. Berry's bull presents, the portrait of which accompanies this account: his dam was purchased by Mr. Berry, on account of the very few crosses that had intervened between her and some of the best of the Teeswater cattle, to which he was desirous to go back, on account of the extent to which breeding in and in, had been carried. When slaughtered, the *proof* of this improved breed is excellent, and many instances are recorded of the wonderful weight of their inside fat. The remarkable difference which existed between the Teeswater and the old unimproved breed of Short-horns, may, with propriety, be ascribed to a spirit of improvement which had for some time manifested itself amongst the breeders on the banks of the Tees, but whose laudable efforts were, however, well seconded by the very superior land in the vicinity of that river; and no reasonable doubts can be entertained, that they proceeded on a judicious system of crossing with other breeds; because it was impossible to raise such stock as the Teeswater, from the pure Short-horn breed.

For an admirable portrait of the improved Yorkshire Dairy cow, we would refer our readers to the Cabinet, vol. 6, page 209.

For the Farmers' Cabinet.

Stubborn Facts.

1. The green-sand marl works wonders on the lands of Jersey, even to the very shores of the Delaware, and vast quantities of this valuable article are brought down the Rancocas creek every year, for the supply of places adjacent; but convey it to the opposite side of the river, and within sight of the scene of its most perfect operations; apply it to any crop, and at any season of the year, and no good whatever, will result from its most careful use.* The same experiment has also been made on the lands of Blockley alms-house, on the west side of Schuylkill, without the least sign of benefit, from the most expensive dressing.

2. Plaster, so beneficial and of such very general use in the United States, has not been known to be of service in England, either as a top, or any other dressing.

3. Bones, which are in such universal demand in England, and which are furnished from this country in the greatest abundance, paying amply for many miles of land carriage, in addition to the expenses of freight across the Atlantic, have been tried in this country, and found "wanting," even after the most liberal and careful application;—while in England, six bushels of bone-dust drilled amongst the turnip seed for an acre of sterile upland soil, is sufficient to quadruple the crop, and leave the most lasting effects for future years.

4. Lime, although generally considered of the greatest importance to the agriculture of a country, has often been known to disappoint the expectations of its friends. It is declared to be useless in the Eastern States, for what reason, it is difficult at present to conjecture. Hence arises, in all probability, a portion of that discrepancy in public opinion, regarding its real value, and the wide and very discordant statements that have arisen, respecting its baneful or beneficial influence; many persons, even now, considering it a septic, while others are as strongly of the opinion that it is antiseptic in its nature. These are stubborn facts, which should teach us prudence in judging the opinions of others, and caution in the formation of our own. Z.

May 18th, 1843.

Manure.

We find the following useful suggestions in a late English paper:

"It is well known that in a close stable, where there are a good many horses, there is a very pungent smell, affecting the eyes and nose, more particularly when the stable is being cleaned out. This smell is occasioned by the flying off of ammonia, which is the very essence and value of manure, and which volatilizes or flies off at a very low temperature—even the warmth of the manure in a stable will send it off, and it goes off in great quantities by the common heat of the manure in a farm-yard, whether thrown up in heaps or not. There is, however, a very cheap and simple remedy for this. Before you begin to clear out your stable, dissolve some common salt in water; if a four-horse stable, say four pounds of salt, dissolved in two buckets of water and poured through the nose of a watering pan over the stable floor, an hour or so before you begin to move the manure, and the volatile salts of ammonia will become fixed salts, from their having united with the muriatic acid of the common salt, and the soda thus liberated from the salt, will quickly absorb carbonic acid, forming carbonate of soda; thus you will retain with your manure the ammonia which would otherwise have flown away, and you have also a new and most important agent thus introduced, viz., the carbonate of soda. As this is a most powerful solvent of all vegetable fibre, and seeing that all manures have to be rendered soluble before they can act upon vegetation, it will be at once apparent that the carbonate of soda so introduced, must be a most powerful and valuable agent."

Air slacked lime is innoxious to growing plants generally, if we except *mosses* and *lichens*, to which it is fatal. Hence it is constantly employed by gardeners, to dust their peas and other crops, liable to be infested by slugs, and also to remove moss, &c., from gooseberry and currant bushes, which it speedily and effectually cleanses. Mixed with coal soot, it causes the extrication of much ammonia, and therefore should never be added to liquid urinous manures, as it volatilizes their ammonia.—*Farmer's Magazine.*

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* Although our correspondent speaks positively upon this subject, we are not aware that fair and thorough trials have been made, to establish the proposition, that the green-sand marl does no good on this side the Delaware, on soils apparently similar to those in Jersey, upon which it produces the greatest and most lasting effects. It is upon the cold, heavy, flat, quick-sandy, but well drained lands of that State, that we find the most astonishing results from its application. We would much like to be more particularly advised of the results of particular and recent trials of this marl in Pennsylvania.—Ed.

Influence of Climate on the fruitfulness of Plants.

The following article, quoted from "a sensible and eloquent American writer," we take from the sixth Number of the Farmer's Encyclopædia. We have been delighted in its perusal, and have no doubt our readers will also enjoy it. There is a vein of sound philosophy running through it,—an aptness of illustration, and mellowness of feeling, which characterize it, in our estimation, as of more than ordinary interest. The writer might have extended his speculations into the animal kingdom, and have been at no loss to produce numerous instances, corroborative of similar views. Ed.

"The cultivated plants yield the greatest products near the northernmost limit in which they will grow.

"I have been forcibly impressed with this fact, from observing the productions of the various plants, which are cultivated for food and clothing in the United States. The following instances will go far to establish the principle.

"The cotton, which is a tropical plant, yields the best staple and surest product in the temperate latitudes. The southern parts of the United States have taken the cotton market from the East and West Indies, both as regards quantity and quality. This is partly owing to the prevalence of insects within the tropics, but principally to the forcing nature of a vertical sun. Such a degree of heat developes the plant too rapidly—runs it into wood and foliage, which become injuriously luxuriant; the consequence is, there are but few seed pods, and these covered with a thin harsh coat of wool. The cotton wool, like the fur of animals, is, perhaps, designed for protection; and will be thick and fine in proportion as the climate is warm or cool. Another reason is to be found in the providence of the Deity, who aims to preserve races rather than individuals, and multiplies the seeds and eyes of plants, exactly as there is danger of their being destroyed by the severity of the climate, or other causes. When, therefore, the cares and labours of man counteract the destructive tendency of the climate. and guaranty their preservation, they are, of course, more available and abundant.

"The lint plants, flax, hemp, &c., are cultivated through a great extent of latitude, but their bark, in the southern climates, is harsh and brittle. A warm climate forces these plants so rapidly into maturity, that the lint does not acquire either consistency or tenacity. We must go far north in Europe, even to the Baltic, to find these plants in perfection, and their products very merchantable. Ireland is rather an exception as to latitude; but the influence of the sun is so effectually counteracted there by moisture and exposure to the sea air, that it is always cool: hence, the flax and potato arrive at such perfection in that region.

"It holds equally true in the farinaceous plants. Rice is a tropical plant; yet Carolina and Georgia grow the finest in the world; heavier grained, better filled, and more merchantable, than any imported into Europe from the Indies. The inhabitants of the East Indies derive their subsistence almost exclusively from rice; they must be supposed, therefore, to cultivate it with all skill and care, and the best contrivances for irrigation. Such is, however, the forcing nature of their climate, that the plant grows too rapidly, and dries away before the grain be properly filled. Indian corn, or maize, if not a tropical plant, was originally found near the tropics; and although it now occupies a wide range, it produces the heaviest crops near the northern limit of its range. In the West Indies it rises thirty feet in height; but with all that gigantic size, it produces only a few grains on the bottom of a spongy cob, and is counted on only as rough provender. In the southern part of the United States, it reaches a height of fifteen feet, and will produce thirty bushels to the acre; in the rich lands of Kentucky and the middle States, it produces fifty or sixty bushels to the acre; but in New York and New England, agricultural societies have actually awarded premiums for one hundred and fifty bushels to the acre, collected from stalks only seven feet high. The heats of a southern sun develope the juices of this plant too quickly. They run into culm and blade, to the neglect of the seed, and dry away before fructification becomes complete.

"Wheat is a more certain crop in New York, the northern part of Pennsylvania, and Ohio, and in the Baltic regions of Europe, than in the south, either of Europe or America. In the north, snows accumulate, and not only protect it from the winter colds, but from the weevil, Hessian fly, and other insects that invade it; and in the spring it is not forced too rapidly into head, without time to mature fully, and concoct its farina.

"A cold climate also aids the manufacturing of flour, preserving it from acidity, and enables us to keep it long, either for a good market, or to meet scarcities and emergencies. Oats grow in almost every country; but it is in northern regions only, or very moist or elevated tracts, that they fill with farina suitable for human sustenance. Rye, barley, buckwheat, millet, and other culmiferous plants, might be adduced to illustrate the above principle; for all their habits require a more northern latitude than is necessary to their mere growth.

"The grasses are proverbially in perfection, only in northern and cool regions, although they will grow everywhere. It is in the north alone, that we raise animals from meadows, and are enabled to keep them fat and in good condition, from hay and grass alone, without grain. It is there the grasses acquire a succulence and consistency enough, not only to mature animals, but to make the richest butter and cheese, that contribute so much to the tables of the luxurious. The grasses which do often, in the south, grow large enough, are without richness and nutriment; in hay, they have no substance; and when green, are too washy to fatten animals; the consequence is, most animals in those latitudes, browse from necessity, and are poor, and without size or beauty. It is the same hot sun which forces them to a rapid fructification, before they have had time to concoct their juices. The sugar-cane produces, perhaps, better where it never seeds, than in the tropics; for the juices will never ripen so as to granulate, until checked by frost or fructification. In the tropics, the cane grows twenty months before the juices ripen; and then the culm has contracted a woody, fibrous quality, to such a degree as to resist the pressure of the mills, and yields but little juice, and that to an increased effort. In Louisiana, we succeed well with the sugar culture; because, while the culm is succulent and tender, a white frost checks the growth, ripens the juices, and in five months gives us a culm, tender, full of juice, easy to press, and yielding much grain of sugar. When Louisiana, therefore, acquires all the necessary skill, she will most probably grow this article cheaper than the West Indies.

"Tobacco is a southern plant, but there it is always light and chaffy; and although often well flavoured, it never gains that strong narcotic quality which is its only peculiar property, unless you grow it as far north as Virginia. In the south, the heat unfolds its bud or gem too soon, forces into full expansion the leaf, and drives it to seed before the narcotic quality can be properly elaborated. We may assert a general rule applicable to all annual plants, that neither the root, nor the leaf, acquires any further size or substance after fructification.

"The tuberose, bulbous, and other roots, cultivated for human and animal subsistence, are similarly affected by climate, and manifest habits in corroboration of the above principle. The Irish potato, although from or near the tropics, will not come to perfection but in northern or cool countries, or in moist, insular situations, as Ireland. It is in such climates alone, that its roots acquire a farinaceous consistence, and have size, flavour, and nutriment enough to support, in the eminent way in which they are susceptible, animal life. In the south, a forcing sun brings the potato to fructification before the roots have had time to attain their proper size, or ripen into the proper qualities for nourishment. In Ireland the plant grows slow, through a long and cool season, giving time for its juices to be elaborated and properly digested; hence that fine farina and flavour which characterize them. The sweet potato produces larger, better flavoured, and more numerous roots in Carolina, where it never flowers, than in the West Indies. In the latter place this plant runs wild, covers the whole face of the earth with its vines, and is so taken up in making foliage, that the root becomes neglected, and is small and woody. In order to have the onion in perfection, it must grow through two years, swelling all the time its bulbs. In the south, however, it seeds in one year, and before it has made much bulb. Beets, carrots, parsnips, turnips, radishes, and other roots, are equally affected by a hot sun, and scarcely worth cultivating far to the south. They all fructify before they have formed perfect roots, and make foliage at the expense of their bulbs; hence they will always be articles of commerce; the south will have to depend upon the north for them.

"The salad plants are in like manner affected by climate, and give further proofs of our assumption. Cabbages, lettuces, endive, celery, spinage, plants whose leaves only are eaten to protect their germs from cold, through a kind of instinct, wrap them up in leaves, which form heads, and render many of their other parts tender and crisp for use. These leaves, thus protected, are not only tender, but more nutritious, because their growth has been slow and their juices well digested. In the south, a relaxing sun lays open the very buds of such plants, gives a toughness and thinness to the leaves, and they are too unsubstantial for animal support, because of such quick and rapid development.

"The delicious and pulpy fruits are, in a still more striking way, illustrative of our principle. The peach, nectarine, plum, apple, cherry, currant, gooseberry, apricot, and many other such families, are not in perfection in the south. It is in Pennsylvania, Virginia, Maryland, Jersey, and in the north of Europe, that we enjoy them, although, originally, they came from places near the tropics. The peach of the Carolinas is full of larvæ, gum and knots, and too stringy and forced to be juicy and flavoured. The apple of the south is too acerb to be either eaten or preserved. The plums, apricots, cherries, currants, gooseberries, &c., will not even mature until we go far north. All the trees which bear these delicious fruits, will grow luxuriantly in the south, make much foliage and wood, with but little pulp, and that unsavoury. The kernel in the one-seeded fruit, seems to be the first object of nature in southern climes: that becomes strong, oily, and enlarged; and one of the peach family has so entirely neglected the pulp, that it has only a husky matter around the kernel, as the almond. The changeableness of the weather in the south, in the spring season, throws plants off their guard; the frosts attendant on those changes, destroy the young fruit; and it is only one year in three, that the crop hits at all. The desiccated or dried state of these fruits, enables us to enjoy them through the year; but in the south, their acidity carries them into fermentation or decomposition, before they can be divested of their aqueous parts. The climate of the south is equally against converting them into cider, or any other fermented liquor, because the heat forces their compressed juice so rapidly into an active fermentation, that it cannot easily be checked until it passes into vinegar. For the same reason, distillation goes on badly in hot climates, and cannot be checked long enough at the proper point to give much alcohol: and whether we aim to enjoy the delicious freshness of these fruits themselves, sip the nectarine of their juices, refresh ourselves with their fermented beverage, stimulate our hearts with their brandies and cordials, or feast through the winter upon the dried or preserved stores of their fruits, we are continually balked by the severity of a southern climate, and for such enjoyment must look to the north.

"The melons are always affected by too great a degree of heat, even though their vines flourish so much in southern latitudes. The forcing sun hurries them on to maturity before they have attained much size, or acquired that rich saccharine and aromatic flavour for which they are so much esteemed. The cantelope-melon will rot, or have its sides baked by a hot sun, before it is fully formed; and the water-melon is always woody, dry, and devoid of its peculiar sweetness and richness, in the south. Vines have been known to run one hundred feet, and bear no melon. It is in Philadelphia, and its neighbourhood, and in similar latitudes, that the markets are loaded with delicious melons of all sorts, whose flavour so much refreshes and delights us. It is there, near their northern limit, that we cultivate them with such uniform success.

"The orange, strictly a tropical plant, is more juicy, large, and delicious, at St. Augustine (Florida,) than at Havana; and fruiterers, in order to recommend an orange, will say that it is from some place out of the tropics. In the West Indies, the pulp of the orange is spongy, badly filled with juice, and has too much of a forced flavour to be pleasant. The hot-house forcers of Europe, or at Rome, anciently, at first produced bad fruit; too dry, too small, and without flavour; because they overacted. They have lately found out that fact, and now the productions of the hot-houses of London, Paris, &c., astonish and delight us with the quantity and excellence of the fruit. They have found out that gradual and uniform heat is the desideratum; countervailing the cold, rather than imparting much heat. Fruit thus produced, is pronounced better than any grown in the natural way, however perfect the climate.

"The juices of the grape are best matured for wine, near the northern limit of their growth. On the Rhine, in Hungary, the sides of the Alps, and in other elevated or northern situations, the wine is strongest, richest, and most esteemed. The French wines rank before the Spanish and Italian; and in no southern country of Europe or Africa, except Madeira, where elevation makes the difference, is the wine in much repute. The grapes of France are more delicious for the table than those of Spain or Madeira. In the southern part of the United States, the excess of heat and moisture blights the grape to such an extent, that all attempts have failed in its cultivation. The grape-vine, however, whether wild or cultivated, grows there very luxuriantly. The vinous fermentation can also be best conducted in a climate comparatively cool; and all the pressing, fermenting, and distillation of the juice of this delicate fruit can be safer and more profitably managed in a mild region.

"The olive, and other oleaginous plants, yield more fruit, of a richer flavour, and can be better pressed, and the oil preserved, in a mild climate. In France the tree is healthier, and the fruit and oil better than in Spain or Italy; and the Barbary States are known to import their oil from France and Italy.

"Many other plants might be named, whose habits would equally support our position. It is presumed, however, that enough have been cited to call the attention of philosophy to this curious subject, and enable us to give proper attention to it, in all the practical operations of agricultural pursuit. Much time and expense might be saved, and profits realized, if this were more generally understood.

"We have already observed, that the heat of the sun in southern climes, forces plants to a false maturity, runs them on too rapidly to fructification, and renders dry and woody the culms, stalks, and leaves of the plants, where these parts are used. Hence the chaffiness of the leaf, the dryness of the culm, the lightness of the grain, and the unsavoury, spongy quality of the pulp of the plants in those latitudes. Hence the difficulty of fermenting their juices, distilling their essences, and preserving for use the fruit, juice, or blades of such plants. The prevalence of insects is another bar to the productiveness of southern plants: swarms of them invade and strip the leaves, bore the fruit, and lead to blight and decomposition; and just in proportion as the labours of man have rendered plants succulent, and their fruits and seeds sweet and pleasant, do these insects multiply on them, devour their crops, and defeat the objects of husbandry.

"The labour of man too is more conservative in northern climates, because his arm is better nerved for exercise, his health and spirits more buoyant; and instead of saying, 'Go and work,' he says, 'Come and work;' treads with a cheerful heart upon his own soil, and assists in the cultivation, collection, and preservation of his own productions. It is in temperate climates that man can be most familiar with nature; it is there he has the best opportunities of observing the guarantees which nature has for the preservation of her animals and plants against the devastation of the elements; he sees an occasional apparent neglect of individuals, but a constant parental care of races. In every thing he sees the wisdom and benevolence of God."

Lord Wodehouse, President of the East Norfolk Agricultural Association, said recently, at one of its meetings, that every one knew, "what is produced from farmyards, was the best possible manure. The greatest chemist in existence, with all his skill and ingenuity, could produce nothing like farm-yard manure. That was quite clear, but still they wanted chemical assistance. He had heard a story of a farmer, who, being told of the great improvements made at Holkham, said, I don't care about Squire Coke, give me muck to my land."

An obedient wife rules her husband.

For the Farmers' Cabinet.

Floriculture.

An intelligent friend, long accustomed to the pursuits of floriculture, and remarkably fortunate in raising plants from seed and cuttings, attributes his success, in a great measure, to the plan he has invariably adopted, which is, to keep his plants as near the level of the ground as possible; the windows of his kitchen affording him the best situation for striking cuttings, &c.; after which come his parlour windows, and then those of his first floor; but above this, his plants never flourish. And the cause for this, he considers perfectly plain and natural; for at, and near the surface of the earth, there is always a degree of moisture floating in the atmosphere; but above, it is wanting; while the altitude of a third story, or an attic, is dry and unfriendly to vegetation.

When the season arrives for the removal of his plants from the house to the open air, he is careful not to set the pots on bricks or a pavement, for these are continually extracting moisture from the earth in the pots, and in hot weather the roots of the plants are thereby scorched and dried up. He places them on the earth, and in watering, pours some between them, and thus the pots are kept moist and cool during the hottest day. It is a fact, that no where have I seen finer plants than his; nor do I know any one who can raise them with such certainty, and with so little trouble or difficulty: and believing that the hint may be valuable to many of your readers, particularly to those whose labours in floriculture are chiefly confined to the house, it is communicated, in the hope that they will reciprocate, if in their power so to do. S. Dale.

Fossil foot marks.—Very many of our readers are geologists, and would therefore be glad to obtain slabs of stones having the foot-steps of extinct animals upon them. A famous locality for these stones, is on the Connecticut river, near Greenfield, in the new red sand stone. Perfect tracks of birds and the impressions of fossil fishes are obtained; but not in such plenty as to furnish all applicants. Plaster models are now substituted, giving exact copies of the foot-steps of Ornithichnites and Sauroidichnites, coloured to nature, all packed in boxes, for which $10 is asked.—*Boston Medical and Surgical Journal.*

Make for the hogs a warm nest—*comfort* is cheap food for all domestic animals.

From the New Haven Herald.

Sociability of Birds.

LETTER FROM A YOUNG LADY TO REV. MR. LINDSLEY, OF STRATFORD.

DEAR SIR,—Having often heard that yourself and family were very fond of birds, and something of a very interesting nature concerning them having come directly under my own observation, indeed quite in connection with myself, I thought an account of it might not prove uninteresting to you.

Early in the summer of 1840, as I was one morning reclining on my couch, in the back room, the doors being open, a very small bird came hopping in, and ran about the floor, apparently in quest of something to eat. I happened to have a soda biscuit about me, and instantly threw it some crumbs, which it ran to eat, as if very hungry. In a few minutes it flew out.

Before long it returned, bringing another with it. I fed them both plentifully, and they flew out. In a short time one returned and partook again: after a while the other: so they continued through the day. I did not think of seeing them any more, but I had no sooner taken my accustomed place on my couch the next morning, when in came one of my little visiters, quite tame and quite at home; it ran near me and took a hasty breakfast and ran out. Soon its mate came, and took his in quite as friendly a manner. Thus they continued coming from ten to thirty times a day, and became so much attached to their hostess, that they would seldom take their meal, ever ready on a clean paper by the door, but would run close to my couch and look up to me, to have me drop it to them at my side, which they would take perfectly unconcerned. They appeared for a time quite afraid of strangers. particularly children, and would look to me as they came in, as if to ask is it safe? However, they soon lost their fears of them, and would come in when three or four were present. After a few weeks they began to carry away large pieces every time they came, after satisfying their hunger, which convinced me that they had little ones to feed, and I was astonished to see what a little load they would carry, oftentimes three pieces at once, as large as half a large pea. Thus they continued visiting me for months, until some time in the last of September, just after tea, at the edge of a delightful evening, I heard such a chirping as almost to deafen me. In an instant the little mother appeared, enticing along her little ones, which were almost splitting their little throats with their chattering; and soon the father appeared. They ran up the steps into the room, and stopped just at the door, perfectly still, except the mother, who ran to me very hastily, stopped at my side, looked up in my face, and began to talk, she thought as intelligibly as any person would, conversing with me. I never was more astonished. I supposed that she was asking me to protect her little ones. She stood in this manner a few moments, talking as fast as she could, when she ran back to her children, and they all commenced eating their abundant meal, which had been prepared for them. When finished, they flew out and visited me no more. I was then convinced that the mother was expressing her gratitude, instead of asking protection.*

I mourned the loss of my little family, not expecting ever to see them again; when, how was I delighted, as sitting at my bedroom window one Sunday morning, early in the month of the next June, the dear little creature who first made its appearance, came running up the walk directly to the door. Feeling very ill, and the morning being rainy, I could not go to let it in,—the family being at church—and was obliged to let it go away, which it did very brokenheartedly, after waiting for some time, without giving it a welcome. I reconciled myself, thinking it would return the next day; but I waited for it, and it did not come, and I had entirely given up the idea of seeing it any more; when, how was I overjoyed one morning, to see it fly into the door and run directly to my couch! She stopped directly before me, looked up and began to chipper. I answered her little how-d' ye-do, and gave her some breakfast. She ran out, and soon her mate came. They then continued their visits from ten to forty times a day, sometimes together, sometimes alone—would often stay and run about the room, and appeared delighted when I felt able to answer their prattle. On stormy days, not being able to bear the damp air from an open door, they, when finding it closed, would come to the window and flutter, begging to come in.

I would open the door a little space, just large enough for them to pass through; they would immediately fly on the scraper and crowd through, evidently delighted, and try to show their gratitude. After taking their meals, totally unconcerned at being shut in, they would amuse themselves awhile, then out again on to the scraper, and fly to their nest. Thus they continued their visits to me again for months, quite at home, and for several of the last weeks, carrying away a large mess every visit, which convinced me they had again a little charge to feed, when one beautiful morning about ten o'clock, oh, such a chirping all of a sudden! and in a moment I had five little visiters on the threshold of the door, the young ones fluttering and chirping so as almost to deafen me, but appearing so happy as hardly to know what to do. I threw down a large mess of crumbs, when the parents instantly ran to me and took them to their just-fledged children, put it in their mouths, and again and again, for some minutes; after being sufficiently fed, all flew out.

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* What a happy and delightful train of ideas does this opinion call up!—ED.

Thus they continued to come, at times all together, sometimes one alone, for several days, but generally three or four together, and hardly leaving me alone at all, running around my feet when at the table, and picking up the mites as they fell, and trying to amuse me. In about two weeks they all came at once, after tea, took an abundant meal, ran about and chattered to me, and ran out. I saw the dear little creatures no more. Had any one told me one half what I had witnessed, I should have thought it exaggeration; but myself was their only hostess, and I can in truth attest, that what I have written gives but little idea of the interest they excited. Should they return again the coming summer, as they probably will, I shall give you a further history. In the meantime, believe me,

Most respectfully yours, C. C.

Stratford, Feb. 4th, 1842.

The above mentioned bird is the chipping sparrow, (frinailla socialis of Wilson.) She and her mate have again returned to visit their hostess. If you deem the above worth an insertion in your Daily, it is at your service. It furnishes good evidence of what kindness and gentleness to the feathered race, at the hands of a young lady, can accomplish. J. H. Lindsley.

We look upon a good book on agriculture, as something more than a lucky speculation for the publisher, or a profitable occupation of his time, for the author. It is a gain to the community at large—a new instrument of national wealth. The first honour or praise, in reference to every such instrument, is, no doubt, due to the maker or inventor—but he who brings it into general use, merits also no little approbation. It is to the more general diffusion of sound agricultural literature among our farmers, that we look for that more rapid development of the resources of our varied soils, which the times so imperatively demand.—*Blackwood's Magazine, April*, 1843.

For the Farmers' Cabinet.

Renovation of Soils.

Messrs. Editors,—An observation on this subject, by the late Joseph Cooper, of Camden, New Jersey, is deserving particular regard, as it evinces, I conceive, originality of thought; and is accompanied by the assurance, that the correctness of the theory has been fully borne out by practice. Mr. Cooper says: "Take the most fertile soil, and continue to exhaust it by constant cropping, until it becomes totally unproductive, then lay it down to grass; and although it be never manured or dressed in any way, during its time of rest, yet if it be broken up at the end of a certain number of years, it will be found to have recovered its pristine fruitfulness. On the other hand, take a naturally poor soil, make it rich by manuring and dressing, and lay it down to grass; on breaking up, it will be found to have gone back to its original state of barrenness, having lost, during the time of its undisturbed state, all the enrichment that had been bestowed upon it, without having yielded it in the production of crops."

The nitre, or salt-petre beds of the East Indies, have been regularly worked over and exhausted, by repeated and periodical lixiviation, for ages; and yet the soil is found in the end to have regained the property of again yielding its full and undiminished quantum of salt, which it must have imbibed either from the earth or atmosphere, without the aid of man, or the addition by him, of a particle of matter of any kind. Would your intelligent readers communicate through the pages of the Cabinet, their opinions on this interesting subject, and also, what application can be made of the fact above mentioned? C.

Gloucester co., N. J.

Ancient Custom.—The road which custom had marked out was beaten and smooth, and the farmer continued to travel upon it—it was a *circle* too, and brought him always to the place whence he had started, and he never lost himself. But in travelling in one path and at one pace, we wear out the road and incapacitate ourselves from travelling at any other pace—so, a long course of injudicious management and cropping, not only exhausts the land, but the practice of a science, the cultivation of which requires no exertion of mind, deadens the spirit of inquiry, and leaves the farmer an easy, uninquiring being, knowing nothing from himself, but governed by an hereditary feeling of obedience to ancient usage.—*Hannam.*

For the Farmers' Cabinet.

Lime,--German Professors and Delaware Reviewers.

Messrs. Editors,—I think it would be advisable, before we proceed further with this discussion, to inquire what the matter in dispute is. Some of the anonymous writers on lime, seem to have entirely forgotten it. I expressed the opinion, that much money was wasted, by applying lime to land that did not require it. I undertook to prove this by showing, that some of the best land in Chester county had never been limed. And as the advocates for lime have asserted, that "primitive soils, without organic remains," were those which more particularly required it—I selected such soils in every instance; supposing if *they* required none, the discussion was ended. I neither knew nor cared, whether they contained naturally large quantities of magnesian lime or not—I took their word for it that they did not. How do they undertake to prove that large quantities should be applied? *A Delawarian* quotes whole pages from Professor Leibig, to show that many soils contain naturally of lime and magnesia, from 1147 to 1365 bushels per acre. Would he advise us to lime such a soil? But not satisfied with the *soil*, he goes to the *subsoil*, and informs us, that it contained 5000 bushels per acre. I should like to know how much of the "*crust of the globe*" he calls subsoil. He also informs us, that alluvial lands in Ohio, contain 275 bushels per acre:—would it not be worse than "carrying coals to Mount Carbon," to lime such lands?

He makes a calculation for us, showing that two per cent. gives 350 bushels per acre, which, he says, "is not so small as 50 bushels;" but I think it is certainly smaller than it would be, if any one was simple enough to add the 50 bushels to it. I thought I was in a fair way to save farmers some money, when I pointed them to a farm that had not been limed for one hundred years; but the Professor goes still further, and shows us land that has never had a particle of lime applied for 160 years! This might do, and would be a very good argument on my side, if he had not added, that it had "never been manured or allowed to lie fallow," and yet had produced for the whole 160 years, the most beautiful crops: with this addition I am ashamed to claim it, for fear no practical man would believe even the part that was probable. If Professor Leibig can form such a soil, with as cheap materials as lime and magnesia, I think some of my Valley friends would give him more for the *patent*, than his book would sell for. What a pity the Frenchmen did not send the Professor the *glass-plate* and two inches depth of wheat straw, on which they grew such fine wheat; some of the "common readers" of the Cabinet, would like to know if the straw (soil) contained 1365 bushels, and the glass plate (subsoil) 5000 bushels lime and magnesia per acre. But I cannot understand why *A Delawarian* advises "animal and vegetable manures," in addition to lime; for it seems, the "very fertile soils" in Germany, according to Leibig, have never been manured with any thing.

It is really amusing to hear, with what great confidence every new writer on Agricultural Chemistry speaks—and how confident their followers are, *that they know all about the growth of plants*—and with what complacency they accuse us, with being "far behind the times," if we do not adopt all their views—"far behind the times," is a very significant expression; I once heard it applied to Judge Buel, for saying he did not think *the multicaulis* would answer as far north as New York.

To the artizan, manufacturer, and miner, such works as Leibig's may be valuable; but to convince *A Delawarian* that the Professor does not know as much as some of his readers suppose, he may take all the contents of his laboratory, select soils and subsoils, from all parts of the world, mix them as he pleases, then follow the *isothermal lines* until he finds the most suitable climate; and yet, with all this at his command, he cannot in this country, grow grapes that will make wine or raisins; or beets that will make sugar: although he may bring the cuttings from his native land, and the beet-seed from France: nor can he give a reason for the failure. Yet we find the cane of this country full of saccharine matter; and Mr. Webb has shown, that 1000 pounds of sugar may be made from one acre of corn-stalks.

To be convinced that scientific men know little about the *action of lime*, we have but to compare them with each other—no less than three of the present writers on lime, speak of "soils unfriendly to mineral agency." Now, where will *A Delawarian* find room to embody this in his report? For additional proofs, we have only to refer to your Cabinet, especially the third volume.

Joseph Cloud, Esq., who appears to be a gentleman of as much real knowledge as any of them, thinks magnesia hurtful, and also says, that lime combined with carbonic acid, is rendered more soluble. Sir H. Davy states, that when combined, they are *insoluble;* some tell us lime *decomposes* vegetable fibre. After farmers proved by experiment that this was not the fact, chemists were compelled to invent another theory, and confess that it *preserved* vegetable fibre. But as common farmers seemed to think vegetable manure must decompose, before it could form a part of new plants, a third theory must be invented, and they are almost as sure they are right this time, as they were twice before. *A Delawarian* now tells us, it only "checks injurious putrefaction—but promotes the healthy decay of vegetable matter, and the excrements of plants contained in the soil." Although at the risk of having my name changed, from *Van-leer* to *Van-dal*, I have another supposition, which is,—that after *magnesian lime* and *multicaulis*, the greatest humbug of the day, is agricultural chemistry. But to continue the comparisons:—

Mr. Lewis acknowledges, that the principal opposition to the *anti-magnesian* doctrine, is found "amongst the farmers of south-eastern Pennsylvania;" and I think it must now be confessed, that farmers in that small portion of the globe, are not *a unit* on the subject. Another writer tells us, that "land in Devonshire, England, is completely ruined by burning—bad cropping—and *over liming*." And "ought not these considerations to admonish" *A Deer Creek Farmer*, "to qualify his publicly expressed opinions, when they are likely to come in conflict with the long established opinions of others?" But the gentleman from Deer creek, is on the right track—experiments are what we want. Mine only apply to primitive soils, far from the ocean,—the sea air may change the very nature of magnesian lime—every poison has its antidote. But when the gentleman mentions "lands in the neighbourhood of Deer creek," that have improved in the most astonishing manner, and in a short time, "by the very means" I have proposed, without lime or magnesia, I hardly know on which side to place him: I would advise "the individuals" he mentions, who have brought ther lands to a state of productiveness not often surpassed, without lime, to let *well enough* alone, until they see some of the "best limed farms" equal their own. But what will *Lancaster County Farmer* say to this? here is poor land, not calcareous, improved without lime;—plaster seemed to keep the clover growing too. Why, Messrs. Editors, if I was unfortunately to step from between them, we should have a second edition of the *Kilkenney cats!*

But to return to the Professor and his transcriber—their whole theory is founded on analysis of soils that had never been limed. Do they certainly know, that magnesian limestone is the same thing after it has passed through the lime-kiln, that it was before? The advocates for powdered limestone were great men in their day, and I thought their arguments quite as reasonable as those the *burnt-lime* men use; but there were no great lime powder manufactories in operation, and they were soon written down, and there we at present leave them. The question farmers now want solved, is not whether lime in its native state, is of benefit, but—is *burnt-lime* of advantage? *A Delawarian* must have a very contemptible opinion of the capacity of your readers, or he would not make such long quotations about every thing but the matter in dispute. It is carbonate of lime and magnesia, not phosphate and sulphate, we are disputing about; if this is kept in view when we read his article, it mostly refutes itself. How does *A Delawarian* know, that "alkaline qualities should pervade all parts of a soil, and that plaster is only needed on the surface?" Has he not told us, that "*plaster retains the ammonia of the soil*, as well as that of the atmosphere?" And when Leibig himself teaches us—this, however, *A Delawarian* does not copy—*that ammonia is the great stimulus to the growth of plants*, so far from perceiving, "why more lime is required than plaster," I see the very contrary—why more plaster should be required than lime. Tell him, if I am "far behind the times" of Leibig and himself, I have no desire to overtake them; I shall have just that much start when they *turn* on their way to plain "common sense." We had better at least wait for the next agricultural work from Germany, before we close up to them; for it appears, a countryman of Leibig, has discovered a process by which grain of all kinds may be grown, without any application of manure to the land before sowing; the mere rolling of the seed in some kind of prepared matter, being sufficient to produce the most luxuriant crops! But I refer my readers to your Cabinet for April, 1843, for the rest of the article. "Ought not these considerations to admonish" *A Delawarian* to be careful how he applies such terms as "far behind the times," to his friends? What becomes of the 6365 bushels per acre, of lime and magnesia, in the soil and subsoil now? In fact, such writers as Leibig, know just enough to mislead men without practical knowledge; especially such as do not enjoy "the perusal of your publication," and are so little acquainted with the most common terms in use amongst farmers, as not to know what we mean, when we speak of *grass lands that have run out*. If such men find a fertile soil, containing a large quantity of native limestone, they do not ask what else it contains,

—but at once conclude, that is the cause of its fertility; they do not even ask whether the lime decreases in the soil, or remains the same after thousands of crops have been taken from it. Some of their deductions remind me of the man, who seeing that heat *lengthened* bars of iron, and cold *contracted* them, concluded *that* must be the reason why the days were so long in summer, and so short in winter!

But, I must not neglect my friend from *Albern*, N. R. D.; I am sorry for his own sake, he did not reconsider his communication; he ought to know, that proving too much is as bad as proving too little. Is it not strange, that when "lime is universally known to benefit the soil," N. R. D. should have ever thought of making such experiments; and still more strange, that he should continue such satisfactory experiments for eight or ten years, before he convinced himself! I will give one more, made by my friend and neighbour, A. R. M'Ilvain, a gentleman well known in Chester and Delaware counties. He made just the kind of experiment with lime, that N. R. D. reports, *marking* the part limed, and would have carefully noted the difference, if he could have seen any; but after the lapse of several years, he tells me he never could perceive any whatever. It was land that had been worn out, and was never limed—primitive soil too. He further said, he thought if lime was ever beneficial, this was the very land for it to act on. The field is now renovated and well set with grass, but I defy any of the advocates for lime, to show us where their favourite was spread. The experiment satisfied Mr. M'Ilvain, without continuing it for eight or ten years, and I think has saved him some hundreds of dollars.

In addition to this, I have just been informed, that one of the most spirited farmers in Delaware county, Mr. Peters, has been trying experiments with lime for several years, and has come to the conclusion, that it does very little good, if any. But perhaps you may think Mr. M'Ilvain's land is "unfriendly to mineral agency." I do not like to expose them, but if the truth must be told, their theory of "soils unfriendly to mineral agency," was invented for the purpose of throwing dust in the eyes of some practical men, that fortunately for us all, gave lime a fair trial, and found it of little or no value. Before this, the lime burners had been recommending its application to all soils,—heavy clays, loose sand, light alluviums, limestone valleys, primitive hills, and turf meadows.

Here let me request my brother farmers to try experiments for themselves; all that is worth knowing in agriculture, was discovered by practical men. Sir H. Davy acknowledges, that "what is wanted in agriculture, are experiments carefully made;" any one volume of the Cabinet, containing, as it does, such experiments, is worth more to us, than all Professor Leibig and Ure ever wrote. Try lime on one acre; if it does not help that, it will not improve 100 acres; —no class of men can try experiments at so little cost; but beware of the experiments of anonymous writers, "whose conscience doth make cowards of them all." It will not do to trust to the experience of European farmers in all things—the turnip husbandry, which does such wonders there, will not answer here. I have some doubts of the usefulness of the *subsoil plough*, in a country where frost penetrates to the depth of one or two feet; it is at least the antipode of raising grain on *glass-plates.*

But above all, do not trust to the lime-burners' favourite proverb, that "if lime puts a man in jail, it will bring him out again." It seems too much like carrying a heavy sled up a long hill, for the pleasure of riding down. And who knows, but after we were once in jail, "the action of *mineral* agency" might prove as unfavourable to us, as it does to many soils?

In closing, I must congratulate your readers on the happy termination of this long discussion, for we all appear to have arrived at the same point at last. *A Delawarian*, in concluding his article, only *advises* the application of lime and magnesia to soils that do not contain them naturally;—*A Lancaster County Farmer* tells us, that *magnesia*, and of course lime, is one of the primitive earths which form all soils, as well as the crust of the globe. *A Deer Creek Farmer* shows, that the best land in Maryland, has never been limed;—Professor Leibig proves, that land may be farmed 160 years, and produce beautiful crops to the last, without lime. "Again, when we consider the general economy of nature, it is no far-drawn inference to conclude," when we see soils such as the valley of the Nile, which have produced the most luxuriant crops from a period, long prior to the building of the pyramids, or the selling of Joseph into Egypt, without a particle of burnt lime being applied, that many soils do quite as well without it.

If my opponents have given each other some hard knocks, I hope no one is hurt; it was only occasioned by their over anxiety to defend their *stone* deity, which crowded them so near each other, they had not room to use their weapons.

J. W. Vanleer.

P. S. I have just opened the Cabinet for May, in which I see a communication from *A L. C. Farmer*, in which he insinuates, I have given the statement in relation to spreading plaster with the shovel, without a proper regard for truth; I therefore inform him, that I received it from a brother-in-law of one of Mr. Buckley's sons, who stated he received it from a son of Mr. D. Buckley. *L. C. Farmer* has, I have no doubt, been within "long gun-shot" of a great many things which he did not see or hear of. I am pleased to see how completely he refutes *A Delawarian's* statement, that plaster is only needed on the surface. But it is amusing to hear, how he attempts to get out of "the soils unfriendly to mineral agency." Who would have thought he meant a *swamp*, which every one knows is unfriendly to every thing but a ditching shovel. I do not wonder three of them stuck fast in it.

The only apology I can give for the length of this article is, that being a sportsman, I I have always been accustomed to using a large charge of shot, when shooting at a flock. J. W. V.

West Nantmeal, May 17th, 1843.

For the Farmers' Cabinet.

Farmers' Club.

"Little Delaware" has taken the lead in the formation of a class of agricultural meetings, which will, in all probability, soon become general throughout the Union. Twelve gentlemen of Wilmington and its neighbourhood, have constituted themselves a Farmers' Club, who meet on the first Thursday in each month, at the house of the members in rotation, at ten o'clock in the morning, and proceed in the examination of all that pertains to the farm of their host—when his fields, his fences, implements, mode of applying manure, rotation of crops, state of live-stock, house, barn, piggery and poultry yard, are all matters for observation and discussion. At an early hour, a plain, but substantial farmer's dinner is served up, after which, agricultural subjects are discussed, experiments reported, agricultural works and journals exchanged; seeds, plants, new grains, &c., distributed, the entertaining member for the next month, agreed upon;—and the Club adjourns always early, to attend to the business at home before dark. The gentlemen who compose the Club, which is restricted to twelve members, are Messrs. Bryan Jackson, C. P. Holcombe, J. W. Andrews, Jesse Gregg, S. Canby, H. Dupont, J. Boies, J. W. Thomson, F. Sawden, W. Boulden, G. Lodge, and Major J. Carr. From these meetings, politics and political matters are very properly excluded, the business being strictly agricultural.

These Clubs will furnish the finest opportunities for the examination and trial of new and improved implements; in the hands of twelve practical men, who have an interest in the soil, their merits will be carefully tested, and their pretensions—properly appreciated—made known to the country, through their unbiassed judgment. In short, such institutions as these, will take place of the often recommended plan of experimental farms, and the results must be permanently advantageous to the community. A favourable notice from such a body of men, would be the highest recommendation that could be obtained. It is understood that a ploughing match upon the grandest scale, will be got up by the Club, at one of their autumnal meetings, a large and wide field for operations being already secured, with the necessary variety of soils, &c., for a full experiment. May success attend their exertions, and may they have cause to say, at the conclusion of each of their meetings, "It is good for us to be here;" on the principle of that good old proverb, "Iron sharpeneth iron—so doth the countenance of a man, his friend." P.

May 26th, 1843.

Cultivation of the Strawberry.—On the piece of ground intended for planting, I spread a layer of *long* stable manure a foot thick. I trench the ground three feet deep, putting the manure at the bottom of the trench. *Long* manure is then spread on the surface of the trenched ground to the depth of six inches, and afterwards dug in. Beds four feet wide are marked out, with a foot-alley between each—which is highly necessary, to prevent those who gather the fruit, from treading between the plants: and lastly, the runners are planted two feet apart. A bed thus made, will last three years without requiring anything further, not even so much as a top-dressing; but the runners should be removed, and the beds kept free from weeds. As I make my plantations from July to October, the plants come into bearing the following spring—strawberries planted upon ground thus prepared, do not require to be watered even in the hottest weather, because of the depth to which the roots will penetrate. I find that stony growing kinds, such as the British Queen, require a more loamy soil than others. If the planting is deferred until spring, the crop will not be half so large.—*Gardener's Chronicle.*

From the Transactions of the Essex Ag. Society.

On Live Fences.

To the Committee on Live Fences:—

Gentlemen,—In compliance with your request, that I should furnish you with a detailed account of my various experiments in the formation of "live fences," with their results, I have the pleasure to send you the following statement; only premising, that I gave to each plant a fair and impartial trial, and that the information I offer, has at least the value of actual experience.

It is now more than forty years since I became convinced of the superiority, both as regards durability and beauty, of live fences over any other mode of enclosure in use among us, and made it my endeavour to ascertain what plant was best suited to the purpose.

I first tried the English hawthorn, but found it would not bear our climate; the long droughts frequent in our warm summers, materially injure its beauty; it is often blighted, and loses its foliage early in August, and even in the more favourable seasons it assumes a wintry appearance in September: it is disfigured by numerous dead branches, which give it a ragged and unthrifty appearance, even in its verdant season; and is very subject to the attacks of the borer, by which I have known a whole hedge to be destroyed. This first hedge, which measures about twenty rods, is still standing in my orchard, but I have long given it up as incorrigible, and it is not included in the present measurement of my hedges; and a second one with which I had enclosed part of my garden, was only kept from decay by subsequently interposing young buckthorn plants alternately with the hawthorns; by this means it became a good hedge; but had it been *all* of buckthorns, it would have been still better. I am so convinced of the unsuitableness of the English thorn for our climate, that I would not admit another hedge of it into my grounds, if it could be done free of expense. My next experiment was with the triple-thorned acacia. This is a very beautiful plant when grown as an individual tree, but it did not answer my expectations for a hedge; the plants ran up without interlacing, and the thorns being mostly upon the upper branches, the hedge was too open at the bottom to be any protection to the land it enclosed; and it was besides, too feeble a plant to bear our more severe winters.

I made my next trial with the crab-apple, and here I failed entirely: a hedge which I formed of this, had nothing to recommend it in any way.

In the year 1808, I happened to have some young plants which had come up from the chance-scattered seeds of the American buckthorn, or Rhamnus cartharticus, and finding they made a good growth in the nursery to which they had been removed, I determined to try to form a hedge of them, and I have been well pleased with the result. They were set out in 1809, and very soon became a fine hedge of about twenty rods in length, which has remained so until the present time; not a single plant having failed from it, nor have I ever known it to be attacked by any insect. This hedge being my first experiment with the buckthorn, I did not keep it headed down so closely as I have since found it expedient to do, and consequently it is not quite so impervious at the bottom as some of my younger hedges, which have been more severely pruned.

Being fully satisfied that I had at last found the plant I wanted, I have since that time, set out various hedges of it, at different periods, until I can now measure 160 rods of them, all, in my opinion, good hedges,—and I do not hesitate to pronounce the buckthorn the most suitable plant for the purpose, that I have ever met with. It vegetates early in the spring, and retains its verdure late in the autumn. I have often seen it green after the snows had fallen. Being a native plant, it is never injured by our most intense cold, and its vitality is so great, that the young plants may be kept out of the ground for a long time, or transported any distance without injury. It never sends up any suckers, nor is it disfigured by any dead wood; it can be clipped into any shape which the caprice or ingenuity of the gardener may devise; and being pliable, it may be trained into an arch or over a passage way, as easily as a vine; it needs no plashing or interlacing, the natural growth of the plants being sufficiently interwoven. It is never cankered by unskilful clipping, but will bear the knife to any degree. During the last winter, I found one of my hedges had grown too high, casting too much shadow over a portion of my garden, and wishing to try how much it would endure, I directed my gardener to cut it down within four feet of the ground. This was done in mid-winter, and not without some misgivings on my own part, and much discouraging advice from others; but it leafed out as early in the spring as the other hedges, and is now a mass of verdure. I have been applied to for young plants, by persons who have seen and admired my hedges, and have sent them to various States in the Union, and I have never in any instance, heard of their failure.

I have also tried the experiment with the American hawthorn, or "Yankee thorn," as it is called in this neighbourhood; but this, though a strong and durable hedge, is very far inferior in beauty to the buckthorn—the leaves becoming spotted in August with yellow spots, which give the whole plant a rusty appearance.

My method of forming a hedge, is to set the young plants in a single row, about nine inches apart, either in the spring or autumn; if the latter, I should clip it the following spring within six inches of the ground: this will cause the hedge to be thick at the bottom, which I regard as a great point of excellence: after this, all that remains to be done, is to keep it from weeds, and clip it once a year. I consider June as the best time to trim it, as it soonest recovers its beauty at that season. The clipping may be done either with the garden shears, a hedge knife, or even with a common scythe.

I believe, gentlemen, I have now given you all the information in my power, upon hedges; and I must trust to your interest in the subject, to excuse me, if I have complied too literally with your request, and made a "twice told tale," too long.

I am, with great respect,
Yours, &c., E. Hersey Derby.

Salem, Mass., Sept. 19th, 1842.

We recollect an observation of Dr. Darlington, in his *Flora Cestrica*, the truth of which has been many times confirmed when passing the hedges of our farmers. "One important fact," says the Doctor, "applies to every sort of thorn, and should be remembered by all persons who may undertake hedging,—which is, that if they are not carefully attended to and skilfully managed, the hedges will become a nuisance, and a source of vexation, rather than a benefit, and had better never be attempted. With due care and skill, they make a valuable and ornamental enclosure."—Ed.

For the Farmers' Cabinet.

Decomposition of Rocks.

In a late number of the Cabinet, mention is made of a person who had the resolution to carry abroad and spread over his field, the stones which he had gathered up in the expectation of ridding the land of encumbrance; and the writer accounts for the injury consequent on the removal of the stones, on merely mechanical principles. In the Boston Cultivator, for May 20th, I find an interesting article on the subject, from which I copy a few remarks.

"More than thirty years ago, the Hon. John Welles concluded that rocks in the soil were serviceable to vegetation; that their action was *chemical*, and that they became decomposed. Now, this opinion is fully established and sustained by the leading agriculturists, both in Europe and America. The rains and the carbonic acid in the atmosphere, take from rocks potash or soda, which is carried down by these rains to enrich the soil; and hence, and for other reasons, trees that are transplanted over a cart-load of stones placed in the hole, thrive better than those transplanted without stones; and the soil taken immediately under walls and mixed with a little lime, has been found equal to street manure." And J. Marston, in his lecture on the chemistry of agriculture, says: "It is important to the agriculturist to understand the relation which the carbonic acid of the atmosphere bears to these alkaline silicates, which occur in the mineral and vegetable kingdom: for, insoluble as they are in water, they are slowly decomposed by the united action of the moisture and carbonic acid of the atmosphere, the latter taking the potash or soda from the silica, and forming *carbonates* of these bases. In consequence of this decomposition, the rock disintegrates and crumbles down, while the soluble carbonate is washed down by the rains or mists, and is borne to the lower ground, to enrich the alluvial and other soils, or is carried by the rivers to the sea. And in the farm-yard and the compost-heap, where matters are undergoing decomposition, the silicates they contain undergo similar decompositions; and by similar chemical changes, their silica is rendered soluble, and is thus fitted, when mixed with the soil, again to minister to the wants, and to aid the growth of new races of living vegetables."

Thus it appears, that stones act chemically, as well as mechanically, in the amelioration of the soil; and it is with reason, therefore, that land valuers and surveyors pay particular regard to the nature of the stones of a soil; those that are grown over with mosses and other vegetable substances, indicating the greatest fertility, from the circumstance of their being of a softer texture, more easily operated upon by the carbonic acid of the air and rain, and therefore sooner decomposed. John Dale.

May 25th, 1843.

An insect trap.—Scoop out the inside of a turnip; scollop the edge of the shell, and place it downward on the earth. The insects will pass into it as a place of retreat, through the holes; and the beds of squashes, melons, cucumbers, &c., may thus soon be cleared of them.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

PHILADELPHIA, SIXTH MONTH, 1843.

Two months ago, we gave the results of some observations made by different astronomers, upon the COMET which had a short time previously been visible, both here and in Europe. We then stated that "Professor Kendall and S. C. Walker, have computed the elements of this comet with great care, and find they do not agree with those of any one on record: it is therefore, in all probability, to be hailed as a new visitant, within the limits of our system." Subsequent communications made to the public, however, render it probable that this conclusion was prematurely come to. Various paradoxical suggestions have been since thrown out, in relation to the path and perihelion point of this remarkable comet. It was at one time suggested, that this fresh starting point to which it was aiming, was many thousand miles within the body of the sun—that the comet in approaching it, had come in contact with the sun, from which it had rebounded, and was flying off in a path that would not admit of its future return.* This was a bold suggestion, made, as they thought, understandingly, by the indefatigable and able observers, at our High School. It seemed to be sustained by tracing backwards the comet's path, as observed when it was receding from the sun. This idea is now abandoned. Comparing the results of observations made by Professor Bessel, of Konigsberg, Encke, of Berlin, and other European astronomers, with those of our own country, S. C. Walker and E. O. Kendall, of this city, in a communication made to the American Philosophical Society, on the 25th ult., place the perihelion point at an extremely short distance from the sun's surface—they give to the comet an elliptic orbit,—express their conviction, that "it is identical with those of February, 1668, and of December, 1689,"—that it has a period of 21$\frac{7}{8}$ years, and will doubtless return "in December, 1864, to be seen under more favourable circumstances than at this visit." Such of our readers then, as shall be here at that time, may have an opportunity of verifying the predictions of our learned townsmen.

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* In the United States Gazette, of the 18th ult., we find a communication from our High School Observatory, in which "the gradual shortening of the mean distance from the sun," of Encke's comet, is referred to, and the natural inference drawn, that it is gradually winding itself up—that it must one day—however remote—actually come in contact with the body of the sun—to join its mass—"a drop in the ocean"—or perhaps to rebound, and fly off in another orbit! The communication goes on to state, that the present comet may have approached the great centre of our system in an *elliptic*, or *parabolic* orbit—have come in contact with the permanent portions of the sun's body—then have rebounded, and flown off with its orbit changed to an *hyperbola*. The idea of an elliptic, or even parabolic orbit being changed after contact, to an hyperbolic one, was, we apprehend, hastily adopted. According to the principles and laws of motion, such a result is impossible.

"THE FARMER'S ENCYCLOPÆDIA

AND

DICTIONARY OF RURAL AFFAIRS:

Embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by CUTHBERT W. JOHNSON; enlarged, improved and adapted to the United States, by a *Practical Farmer*, assisted by numerous scientific gentlemen, is now in course of publication by Carey & Hart, of this city."

At the close of the sixth number, an extended article on the Dairy is commenced; it is continued and closed in the seventh number, and will be found worthy the perusal of every good farmer, who is desirous of becoming acquainted with the profits and conveniences, and necessities of a Dairy, and who would place within reach of his better half, all the facilities for supplying his board with such butter and cheese, as he would like to invite his friends to help themselves to—such as he would be proud to carry to market, and as the good house-wife would be ambitious to supply.

OUR friends in Delaware and Jersey, are anticipating abundance of peaches. They afford a healthful luxury, which citizens are ever ready to indulge in. We sincerely hope fine crops and good prices may be realized. We gather too, from various parts of the country, that wheat is generally promising pretty fair.

POUDRETTE.

ARRANGEMENTS have been made by the subscriber with D. K. Minor, of New York, for the sale of this valuable manure, as noticed on page 288. It may be obtained at the office of the Farmer's Cabinet, No. 50, North Fourth street, where we expect to keep a supply constantly on hand. Farmers, gardeners, and the truck growers in New Jersey, will now have an opportunity to avail themselves of an article, so much valued in Europe, and in the neighbourhood of New York, where it is manufactured. The price will be two dollars a barrel, where one or two only are taken—for three or more, it will be somewhat reduced.

We learn from the manufacturer, that Poudrette is extensively used in the vicinity of New York, and to good purpose, *as a top-dressing for corn.*

JOSIAH TATUM.

IT is highly gratifying to observe in our market, a general upward tendency in agricultural productions. Wheat, flour, corn, beef, as well as many of the more perishable articles of the farmer, command remunerating prices. Our manufacturers too, are more active than they were. Their goods are finding their way to almost every portion of the globe, where our flag is seen. To China, the British East Indies, and to Asia generally, we are able to hold out inducements for them to become large and increasing customers for our cotton goods. Let each one get out of debt and keep so, and the period of activity and thrift will soon open to us.

German Vegetable Cattle Powder.

This valuable powder, prepared and sold by the subscribers, has been in use for many years, and is highly esteemed by the farmers of Lancaster County, as a preparation upon which full reliance can be placed, for the cure of those diseases to which cattle, sheep and swine are subject.

Farmers, drovers, and all who keep cattle, will find this a superior *Powder*, and none should be without it; it purifies their blood, removes all gross humours, restores lost appetite, and when cattle are oppressed by heat, fatigue, or from other causes, a few doses will generally restore them to health again; and it is confidently recommended as a certain and sure cure, for that dangerous and often fatal disease, the *horn-ail.* By its salutary influence upon their system, it greatly improves the general appearance and condition of cattle, sheep and swine, and increases the quantity of milk in cows.

J. F. HEINITSH & SON'S

Medicinal, Drug and Chemical Store, East King street, Lancaster, Pa.—Put up in packages of twenty ounces, price 50 cents. For sale also by Peter Lehman, No. 320, Market street, between Ninth and Tenth, Philad.; and R. W. Walker, Parksburg, Chester county, Pa.

The Biblical Cabinet.

James M. Campbell & Co., No. 98, Chesnut Street, propose to publish a periodical under the above title, to contain valuable and costly treatises on theological subjects, which are now—owing to their very high price—beyond the reach of any but the wealthy. It will be their endeavour to give no works but those of the highest character, and such as shall be free from the charge of Protestant sectarianism.

The first book will be *Neander's History of the Christian Religion*, during the first three centuries;—translated from the German, by Henry John Rose, B.D. This work has never been republished in the United States, and is very scarce. It will be completed in about five numbers; at twenty-five cents each. For the pleasure of looking over the first two numbers, we are indebted to the courtesy of the publishers. They contain 96 pages each, and are neatly executed. They may be obtained at 98 Chesnut street, or at this office.

SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. The money to be paid in advance.

The quantity of rain which fell during the Fifth month, (May,) 1843, was a little more than two inches. .... 2.045 inches.

Pennsylvania Hospital, Sixth mo. 1st, 1843.

Many of our exchange papers, from different parts of the country, say this is to be the *Locust* year.

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THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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PROPRIETOR AND PUBLISHER,
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For the Farmers' Cabinet.

The Milk Cellar.

It is a curious fact, but by no means unaccountable, that in many parts of the country the milk *cellar* is superceding the *spring house*,—an appendage that has always been considered indispensable for the production of good butter, be the other qualifications of a farm and its appurtenances what they might. While on a visit to Wilmington, Delaware, I had occasion to remark the excellence of the butter at my friend's table, when he replied, he always selected the best cellar butter at market, for the use of his family, giving it as his firm conviction, that butter made in a cellar, was far preferable to that made in a spring-house, its great recommendation being, in keeping sweet and good much longer, and retaining its fine flavour and colour to the last, which spring-house butter would not do. And he observed, it is customary to account for the greater price which some dairymen obtain for their butter in the market, by saying it is *cellar butter;* instancing the fact, in the high character of that made by Mr. Bryan Jackson, near Newcastle, who never fails to obtain the top price of the market, for butter of the finest quality; he having a cellar that might be taken as a pattern for all that part of the country. Of course, it is readily admitted that much depends on the mode that is adopted in the management of the dairy, commencing with the breed and feed of the cows, and ending with the manipulations of the butter; but the idea is gaining ground, that the best butter is to be made in a cellar, all other circumstances being equal: a remarkable revolution in public opinion, truly.

On reconnoitering amongst my friends, I found that several of them had substituted the cellar for the spring-house; and I do not know one who is not satisfied with the arrangement, except it be where the cellar is dug in a damp soil, or has been most injudiciously opened to the well, the evaporation from which fills the room with constant moisture, which may be found adhering to the walls, the ceiling and the wood-work, the shelves, and particularly the inside of the door, causing a damp and clammy feel, and a nauseous, mouldy smell, which the butter imbibes, to its lasting injury: indeed no good butter can be made in such places. But another revolution is taking place, even amongst the advocates for the cellar: it is no longer thought necessary to dig the cellar very deep, or to arch it over with stone or brick, with an air passage through it for ventilation—a *vault*, as it is more properly then termed: it is found sufficient, if the cellar be sunk a few feet below the surface of the earth, with a wide and shallow window on each side, the bottom of it level with the ground outside; well protected with a wire guard to keep out vermin, large flies, &c., and provided with a close glazed sash, which can be opened and closed at pleasure, by lifting it up to the *ceiling*, which ought to be no higher than the top of the windows; so that the air of the cellar can be ventilated by opening the windows of the two opposite sides, according to the way the wind sets at the time, shutting them quickly when necessary; for in cold, windy, or damp weather, the sooner the windows are again closed, the better. Indeed, to the management of the cellar in this particular, much of the success of dairying is to be attributed; cold and damp air being unfriendly to the secretion of cream, and its proper and entire separation from the milk. Hence, therefore, it is a bad practice to set the pans on the brick floor of the cellar; they ought always to be placed around on shelves, about three feet in height, and these, after being well washed with hot water, should be wiped quite dry, that no mouldy evaporation might take place to spoil the butter. The air near the floor of a dairy is always impure, being loaded with acid vapours and putrid exhalations, the density of which confines it to the lowest part of the room; hence it is, that the doors of some dairies are made with lattice work, that the air near the floor, as well as that near the ceiling, might be ventilated at the same time; these lattices being furnished with sliding panels, to be kept close in bad weather. The milk cellar ought always to have a northern aspect, and be well shaded by trees, not growing too near the windows, so as to impede a dry current of air, or to create a moist atmosphere; this consideration being of more importance than would readily be imagined.

Cellars thus constructed and carefully attended, will, no doubt, supercede the use of spring-houses generally, before many years have passed away; by which the business of the dairy will be rendered more agreeable, less laborious, and far less inimical to the health of those, particularly of females, whose occupation it is to attend to its never ceasing duties. T. Miller.

Delaware, June 13th, 1843.

Site for Building.

Editors of the Cabinet,—I have noticed in the last number of Hovey's Magazine of Horticulture, some excellent remarks extracted from the transactions of the New Haven Horticultural, and the New Haven County Agricultural Societies, for 1841, on the subject of building, which I take the liberty of sending you. There is but little in detail, but the hints appear to me judicious. When a farmer is about to put up new buildings, it very frequently happens that he hardly appreciates the importance of doing it properly—both with reference to location and plan. It is not for himself only, or for the convenience of his family alone, that he goes to the expense of this outlay, but it is also for those who may come after him: and it needs no great gift of logic, to comprehend that if for the same amount expended, he can secure a certain pleasantness of situation, and multiplicity of conveniences, he does himself and those who follow him, injustice, if he does not look diligently and understandingly around, and avail himself of them. Yours, &c., S.

"A spot for building should be at an easy distance—not less than two hundred feet from the road, slightly elevated, and protected on the north and west, if possible, by a hill or grove, and near as may be to the centre of the farm. If there are a few forest trees scattered here and there, do not imitate the green horns who come from the cities to build where they can have a shady and cool retreat, and then deliberately cut down the native trees as being vulgar, because they are common, and in their place set up a forest of bare poles, as if for the pleasure of waiting for them to grow. Let such trees stand for shade and beauty forever, or at least until your fruit trees are mature. These should be planted in front and around the house; of the choicest varieties, and arranged with good taste and for future effect. Let the barns and all the out-buildings be placed at a convenient distance in the rear, and leave two or three shade trees in the barn-yard, that the cattle may have their share of comfort, for it should be remembered that trees are accommodating and economical; shady in summer, open in winter, and that a good forest tree drops leaves enough in the fall, to add half a load to the compost heap."

"The garden, of liberal dimensions, needs as nearly as possible, a southern exposure, and if there is an unfailing spring or a bright sparkling brook near by, so much the better. The farmer will find that by attention to such points as these, he may do without ginger-bread work upon his house, and that the simple and unpretending cottage, neatly kept, and looking out from among fruit trees and vines, will be far more attractive than a gaudily coloured house, exposed to the dust and heat of the turnpike. Why should he take from choice, the location which in cities, is only submitted to from necessity? When expensive houses are to be erected, a small sum paid for a proper plan, will be more judiciously expended than any other part of the outlay."

For the Farmers' Cabinet.

Agriculture in Mississippi.

Gentlemen,—As a reader of the Farmer's Cabinet, from its commencement up to this time, let me thank you for the very large amount of valuable knowledge I have derived from it; and allow me to offer my mite of information, as some return for that that I feel myself indebted for, over and above the trifling amount of subscription.

You seem to think that a sketch of the progress of agricultural improvement in Mississippi, would be of interest to your readers. Although, as you are aware, my *residence* here has been only of some little over one year's duration, yet even during that time I have seen a great change, and that for the better. The principal crop here raised for export—in fact, I may say, the only one—*is cotton, short-staple cotton.* Until within the last five years, it afforded such an enormous profit over the cost of production—or rather, it yielded such *a heavy cash income*, that the cotton planter felt himself *above* paying the least attention to any other crop, or to stock. Not one in fifty, grew a sufficient supply of corn for his plantation; and fewer still, who had not to buy every ounce of meat, and yard of clothing that they required. Every one had his overseer, at a salary in the neighbourhood of a thousand dollars, to whom was surrendered the entire management of the plantation and negroes, whilst the planter himself was spending his time and the proceeds of his crops—frequently a crop or two in advance—in travel, or city life. There were cows and oxen on every plantation—because the former were needed to produce the latter, which were indispensable. But little care was bestowed on them in any way, and none on their improvement. To this, of course, there were *some few exceptions*—though but few.

Now the case is altered. The ruinous price of cotton has taught the necessity, and agricultural papers and societies have pointed out the way of changing all this. It was always supposed that pork could be purchased cheaper than it could be raised; and probably it was so, when cotton brought in $50 per bale, of 400 lbs.; and the only sort of *critters* they had to make pork of, were those shocking *varmints*—those long-nosed, alligator-looking customers, yet so common. But with cotton at $15 per bale—and thorough-bred Berkshires, at $20 to $30 per pair, which it was found could be kept fat on green oats, clover, peas, or almost anything, and killed at twelve months old, to make a half-barrel of mess pork—planters begin to find that they can make their meat at home. Cattle too, and sheep, are receiving an almost equal share of attention—large crops of corn are raised; and fields of common, and Egyptian, or winter oats and rye, are studding the country with their cheerful and refreshing appearance—more turnips, and sweet and Irish potatoes are raised—upland rice too; and even hemp. Feed is cut up before being fed out—corn chopped, and cotton seed boiled—cows are fed and milked; and the milk given out as a regular supply to the negroes. Tools and implements are made at home—as also cloth; and in some instances, which I hope will quickly increase, *cotton* bagging is made. The planter makes his home on his plantation, or at all events, attends to his own business, many dispensing with an overseer altogether. The aim now seems to be, to raise and produce everything at home that is needed, and have the proceeds of the cotton crop a net income—those *in debt*, exerting themselves to get out—and those *out of debt*, to keep so.

There is still, however, too much cotton produced—*entirely* too much. But for this, it would be difficult to propose an effective remedy. The *only* one will be, *the introduction of other staples.* Indigo was cultivated to advantage, and found profitable before the high price of cotton drove it out. *Upland* rice does well—and many of our river and bayou bottoms could be *flooded* with but little expense and labour. Silk, and wine can be made to infinitely better advantage than with you. Pork and wool are produced *at half the cost* that they can be in the North, and cheaper even than in the West. The New Orleans and West India markets could be supplied with hay, made from *Bermuda grass*, grown on lands too often flooded, to produce cotton or corn. It has been proved, beyond a doubt, that this delicate looking grass, at three cuttings, in one season, produced *over* five tons per acre, on land on which it was a volunteer growth.

You will see from this, that the opinion advanced by many, that the South *cannot* supply her own wants within herself, is, in a good many instances, an erroneous one.

Yours, &c., T. A.

Ingleside, Adams co., Mississippi,
May 15th, 1843.

DESTRUCTION OF THE CURCULIO BY THE USE OF SALT.—Now that the season is approaching when the Curculio begins to emerge from the ground, we are induced to request fruit cultivators to try the effect of salt in destroying them. We have been assured by several experienced fruit cultivators, that they have found salt a perfect preventative against the ravages of this destructive insect, and that they have had annually good crops of plums, while their neighbours have lost a larger portion of their fruit. Our friend Captain Lovett, of Beverly, informs us that he has applied half a peck or more of salt to each tree, spreading it on the ground as far as the branches extend. This is done about the first of June, and as it is washed into the ground by the rains, it appears to prevent the Curculio from making his way alive through it. The salt does not appear to injure the tree in the least. We would advise all our friends who have plum trees subject to the attacks of the Curculio, to try this remedy, and send us an account of their experiments for publication, in order that all the information possible may be elicited, which may lead to a certain remedy for this insidious enemy of the plum cultivator.—*Hovey's Magazine of Horticulture.*

Relative weight of roots and leaves.

An interesting series of experiments on the relative weights of the roots and of the green leaves and stems of various grasses, made by Hlubek, throws considerable light upon their relative efficacy in enriching the soil by the vegetable matter they diffuse through it, in the form of roots. The grasses were grown in beds of equal size (180 square feet,) in the agricultural garden at Laybach, and mown on the fourth year after sowing, just as they were coming into flower. The roots were then carefully taken up, washed and dried. The results were as follow:—

Kind of Grass.	Produce in		Produce in Roots.		Weight of dry Roots to 100 lbs. of Hay.
	Grass.	Hay.	Fresh.	Dry.	
	lbs.	lbs.	lbs.	lbs.	lbs.
1. Festuca Elatior—*Tall Fescue-grass* - - - -	124	36	56	22	61
2. Festuca Ovina—*Sheep's Fescue-grass* - - - -	90	30	——	80	266
3. Phleum Pratense—*Timothy-grass* - - - -	90	25	56	17	60
4. Dactylis Glomerata—*Rough Cock's-foot*	202	67	——	22½	33
5. Lolium Perenne—*Perennial Rye-grass*	50	17	——	50	300
6. Alopecurus Pratensis—*Meadow Fox-tail*	106	35	——	24	70
7. Triticum Repens—*Creeping Couch or Quicken-grass*	120	60	——	70	116
8. Poa Annua—*Annual Meadow-grass*	——	—	——	—	111
9. Bromus Mollis and Racemosus—*Soft and smooth Brome-grass*	——	—	——	—	105
10. Anthoxanthum Odoratum—*Sweet Scented Vernal-grass* - - -	——	—	——	—	93

A mixture of white clover, of ribwort, of hoary plantain, and of couch-grass, in an old pasture field, gave 400 lbs. of dry roots to 100 lbs. of hay—and in a clover field, at the and of the second year, the fresh roots were equal to one-third of the whole weight of green clover obtained at three cuttings—one in the first, and two in the second year—while in the dry state, there were 56 lbs. of dry roots to every 100 lbs. of clover hay which had been carried off.

The fourth column of the above table, shows how large a quantity of vegetable matter some of the grasses impart to the soil, and yet how unlike the different grasses are in this respect. The sheep's-fescue and the perennial rye-grass—besides the dead roots, which detatch themselves from time to time—leave, at the end of the fourth year, a weight of *living* roots in the soil, which is equal to three times the produce of that year in hay. If we take the mean of all the above grasses as an average of what we may fairly expect in a grass field—then *the amount of living roots left in the soil when a four-year old grass field is ploughed up, will be equal to one-sixth more than the weight of that year's crop.*

In an old pasture or meadow field again, when ploughed up, *the living roots left are equal to four times the weight of that year's hay crop.* If a ton and a half of hay have been reaped—then about six tons of dry vegetable matter remain in the soil in the form of roots.

In the case of clover, at the end of the second year, the quantity of dry vegetable matter left in the form of roots, is equal to upwards of one-half the weight of the whole hay which the clover has yielded. Suppose there be three cuttings, yielding four tons of hay, then *two tons of dry vegetable matter are added to the soil in the form of roots, when the clover stubble is ploughed up.*

But the quantity of roots, like that of green produce, is dependant upon a variety of circumstances. It will sometimes, therefore, be greater, and sometimes less than is above stated. It may be received as a rule—not without exceptions perhaps, yet still as a general rule—that whatever causes an increased produce above ground, will cause a corresponding increase in the growth of roots. Thus nitrate of soda, which gives us a larger yield of hay, makes the roots also stronger and deeper, and the sward tougher and more difficult to plough. Hence it is, that the farmer is anxious that his clover crop should succeed, not merely for the increased amount of green food or of hay it will give him, but because it will secure him also a better after crop of corn.

This burying of recent vegetable matter in the soil, in the form of living and dead roots of plants, is one of those important ameliorating operations of nature, which are always to some extent going on, wherever vegetation proceeds. It is one by which the practical man is often benefited unawares, and of which—too often. without understanding the source from whence the advantage comes—he systematically avails himself in some of the most skilful steps he takes, with a view to the improvement of his land.—*Lectures on Agricultural Chemistry.*

For the Farmers' Cabinet.

The Chaumontelle Pear.

In the Massachusetts Ploughman, the Hon. B. V. French, makes mention of the Chaumontelle pear, being "an indifferent fruit on a gravel soil, but on a rich, moist soil, it has *sometimes* grown delicious." Now here is convincing evidence that much indeed depends on climate, soil and situation, for this variety of the pear, in France, and particularly in the island of Jersey—where it is said to rain 365 times a year, is acknowledged to be the very finest of all the tribe, the best bearer, the most valuable at market, and withal so delicate, that they will not bear their own weight in transportation, without crushing. It is customary to send from Jersey great quantities of this delicious fruit, to England and elsewhere, and the mode they adopt to fix the price per pear, is curious: they have a board with different sized holes through it, each hole being marked with the price at which the pear—which will fill it in passing through, shall be charged in the market; the largest bringing twenty-five cents each, by the hundred, and that readily. They have also a singular mode of packing them for exportation: a flat box is prepared with a number of small hooks driven into the inside of the cover; to these the pears are tied by their stems singly, so they swing with the motion of carriage, free of each other: they would crush with their own weight, were they to lie on their sides.

It is customary for the military governor of the island, to send every year, a handsome present of these pears to the royal family: one year they were late in ripening, when the governor received a note from the princesses, the daughters of George the III., saying they had not forgotten the annual tribute, and hoped that he would remember it.

My wish in this communication is, to ascertain if any of the readers of the Cabinet, have this delicious pear in cultivation, and if grafts could be obtained another year? I have an idea that they might be made to flourish and bear "delicious fruit" *always*, in some portion of our fine country—possibly on the other side of the Alleghaneys, or even amongst us on the seaboard, if a "moist rich soil," prepared too, by excavating the subsoil, and partially filling with stones:—(the island of Jersey is of primary formation, a solid rock of granite,) and perhaps adding a pavement of the same around their trunks, according to the mode adopted by Mr. Jabez Jenkins, of West Whiteland. In conclusion, I would ask, with all due deference, do we not cultivate a greater variety of fruits than is necessary, or even profitable? In our catalogues of trees for sale, we often find great numbers advertised, of secondary, and even of inferior quality, admitted even so, by the cultivators themselves; and for what earthly purpose, no one can tell: for the best must be *the best*, and there is an abundant number of those, sufficient to satisfy the most fastidious, as well as to suit all soils, and climates, and situations. In the peach, this rage for variety has been carried to excess, as we see in the great quantity of inferior fruit that is brought to market in kindly seasons. It is asserted, that at a single horticultural establishment, there are no less than 2165 different varieties of fruit, viz.: 910 apples, 510 pears, 160 plums, 60 cherries, 30 peaches, 20 nectarines, 14 apricots, 115 grapes, 50 figs, 24 nuts, 230 gooseberries, 10 currants, 8 raspberries, and 24 strawberries. Would it be uncharitable to suppose that two-thirds of this number must be worthless? C. W.

Bucks co.

Mr. Scott, of South Carolina, has succeeded in engrafting the lilac on the ash; this is done in France with perfect success, and nothing can be more beautiful than the drooping ash, hung with the elegant flowers of the lilac.

From the Cultivator.

Guano as a Manure.

Messrs. Editors,—This article, now making a considerable noise in the world, and attracting the attention of agriculturists in Europe and America, was first introduced into the United States in 1830. At that time the writer of this article received a barrel of it, and distributed it to many persons, reserving a small portion for his own use. From an ignorance of the proper application of it, probably, it either destroyed every thing on which it was applied, or produced no effect. So far as the writer heard from those to whom he gave it, one or the other of these effects resulted in every case. Since then it has been occasionally introduced in small parcels, but nothing favourable to its high value, has as yet resulted from its use in this country, so far as the writer is aware. But it has not been tried with sufficient care and information of its nature; and therefore no judgment of its value can be formed from any experiment made with it in this country. The object of this paper, therefore, is to lay before American agriculturists all the information at present to be had, of its true character, the materials of which it is composed, and the results of experiments made with it in England.

Baron Humboldt first introduced this article to the notice of Europe. He considered guano as the remains of birds' dung, that has accumulated on the shores of certain islands on the coast of South America, Pacific side, between the 13th and 21st degrees of south latitude, from time immemorial. Its composition, according to Volckel, (the most recent analysis,) is as follows:

Urate of ammonia, - - -	9.
Oxalate of ammonia, - -	10.6
Oxalate of lime, - - -	7.
Phosphate of ammonia, - -	6.
Phosphate of magnesia and ammonia,	2.6
Sulphate of potash, - - -	5.5
Sulphate of soda, - - -	3.8
Sal ammoniac, - - -	4.2
Phosphate of lime, - - -	14.3
Clay and sand, - - -	4.7
Organic substances not estimated, containing 12 per cent. of matter insoluble in water, soluble salts of iron in small quantity, water,	32.3
	100.0

From this analysis, it appears that about one-third of the whole mass of guano is salts, of which ammonia is the base; one-fifth is phosphoric salt, and one-fifth a salt of which lime is the base; and that all the other ingredients, (potash, soda, &c.,) are universally considered highly valuable, and even necessary ingredients of good soils. But the ammonia, of which so large a portion of guano consists, is the most important of all nutritious salts, on account of the large amount of nitrogen it affords. It is a subject, however, worthy of consideration, whether we cannot obtain all the valuable properties of guano directly from the chemists, in the form of the various salts of which guano is now known to be composed, at less expense than we can guano itself.* A very respectable mercantile firm in Baltimore, who have received a moderate quantity of guano for sale, informed the writer that the cost of importation, all charges included, (and including the duty assessed by government, of 20 per cent.,) was seven cents a pound. This price, it is believed, will effectually prohibit its use in this country, no matter how valuable it may prove to be as a manure; because from two to four hundred weight will be required to the acre, and thus it will cost from $14 to $28 per acre, to manure the ground. But if it cost seven cents to import it, of course it must be sold at eight or ten cents, to yield a profit to the importer, and of course it will not be imported unless it yield this profit. It is, however, hoped that there is some mistake as to the cost of importation, because it is well known that the article retails in England, at 20 shillings per hundred weight. Of course, the profits of the importers, and also of the retailers, are added to the cost of importation; and if all these together, amount to only four cents and nine-tenths per pound, it is difficult to conceive how the simple cost of importation into this country, should be seven cents.

As to the value of guano as manure, all who have published the results of their experiments in England, concur in the opinion that it is very great. The writer of this, has searched the agricultural periodicals of Great Britain, published during the last two years, and has not been able to find a single objection as to its high value. On the contrary, all the writers concur in the opinion that it can be very profitably applied as a manure, when it costs twenty shillings a hundred weight.

The manner of applying it in England, appears to have been various. Some mixed it with pulverized charcoal, some with wood ashes, others with seed wheat, oats, or barley. Some sowed it by itself, broadcast, others applied it in the drills, hills, &c. Mixing it with pulverized charcoal, in the proportion of one measure of guano to three of charcoal, and sowing it broadcast, seems to the writer, to be the best plan, unless a watery solution should be preferred. The quantity of guano applied to each acre, was generally two hundred weight; but several experimenters considered that a larger quantity would have yielded more profitably, and the result of experiment confirmed the opinion. One writer concluded that eight hundred weight might be applied to the acre with advantage; and that if more were applied, it would injure, if not destroy the crop.

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* *Artificial guano* is regularly advertised for sale in the English agricultural papers, at £15 per ton, which is 25 per cent. cheaper than the guano itself.

There is one striking defect in all the reports above referred to—not one of them describes the *kind of soil*, whether stiff, sandy, or otherwise, on which their experiments were made. Perhaps they supposed that simply naming the kind of *crop* grown, would indicate the kind of soil. It might do so in England, but not in this country, where every kind of crop is raised, or at least attempted to be raised, on every kind of soil almost.

The crops to which guano was applied in England, were wheat, rye, barley, oats, turnips, ruta-baga, Italian rye-grass, clover, hops, and artificial grasses generally. The produce of land manured with it, compared with that on which other manures were applied, was various in comparative amount, but always exceeded that of all other manures. For example, a piece of land was manured with guano, at the rate of two cwt. per acre, and another with 18 loads of horse manure per acre, both seeded with barley at the same time. The produce was 10 per cent. more from guano than from horse manure, and the latter was 50 per cent. more costly. Another piece of land was manured, one acre with six cwt. of bone dust, and another with two cwt. of guano, and both seeded in wheat. The product of the bone dust was 36 bushels, that of the guano was 50 bushels one and a half pecks. Another field was divided into four parts, to the first was applied three cwt. per acre, of guano, to the second three cwt. of nitrate of soda, to the third 20 tons per acre, of farm-yard manure; the fourth was left without manure. The whole was seeded with Italian rye-grass, and when harvested, the product was as follows:

Guano yielded,	14 tons,	15 cwt.	26 lbs.
Nitrate of soda,	14 "	13 "	37 "
Farm-yard manure,	13 "	2 "	96 "
Without manure,	7 "	0 "	108 "

The above examples are deemed sufficient to afford a fair view of the value ascribed to guano in England, as they may be considered averages of a great number of results. They may be sufficient to induce a *trial* of the article in this country; for we must not forget that many articles that have received the highest commendation in England, have proved *worthless* in this country. It is not very easy to find a reason for this, but it is true nevertheless. In nearly all the experiments with guano, the results were very nearly the same as those with nitrate of soda, and in the very extensive one just above given, it will be seen that the effects of the nitrate of soda, were very nearly the same as those of guano. Now so far as I have been informed, the application of nitrate of soda as manure, in this country, proved of no value. A friend informed me a few days since, that he had used it extensively, without the slightest beneficial effect. So it appears that what is good manure in one country, may be perfectly inefficient in another. On this subject, I will trouble you again shortly. GIDEON B. SMITH.

Baltimore, Feb. 13th, 1843.

Effects of Soap-suds on Cabbages.

I BELIEVE it will be a thankless piece of service for one gardener to teach another how to grow cabbages and cauliflowers, yet as these crops of vegetables have failed this season in various parts of the country, the following notice may perhaps, be of use to our cottage readers. Wherever soap-suds have been used plentifully, cabbages and cauliflowers have grown luxuriantly. I have made several inquiries of others who have used them, and in no one instance have I heard of a failure where soap-suds have been applied. I intend to try them over brocoli, to see if they will prevent them from clubbing. Others may do so likewise, and make known the results. Whether the alkali in the water has prevented the enemy from destroying the roots, or given the roots more vigor to resist the attack, I do not know; but one thing is certain—where such matter has been applied, it has produced the most beneficial results. I think cottagers may take a lesson from this, and save that which would nourish their languishing crop, for it is a pity to see a pool of filthy water polluting the neighbourhood with its stench; while, within a few yards of it, the vegetables of a garden are dying of starvation.—*Gardener's Chronicle.*

IF a man cheats you, quit dealing with him; if he is abusive, quit his company; if he slanders you, take care to live so that nobody will believe him.

Locust Years.

Some discussion in regard to the exact year in which the seventeen year locusts make their appearance, is now going on in the various newspapers. A correspondent of a Hartford paper, says that he well remembers three locust years—1792, 1809 and 1826, and states that he has learned from his father, that 1758 and 1775 were locust years also. There being 17 years between all these dates, he concludes that 1843, which completes another like period, will bring a return of the insect named. In opposition to this, a gentleman of Philadelphia states, that he well remembers the locust year in 1783, when, at the age of ten years, he was taken by his father to "Lebanon Garden," situated at the corner of Tenth and South streets, and then some distance from the city, where were thousands of locusts and hundreds of people assembled to see them. He also remembers their appearance in 1800, 1817, and 1834, and has memorandums of all these periods. According to this authority, the locusts will not again appear until 1851. Our own recollection is distinct in regard to 1817, as also in regard to 1834. In 1817, we remember that they were so numerous, and the noise of their singing so loud, that two persons walking together in the woods and conversing, could not hear each other speak, unless their voices were raised to a very high pitch.

Here are positive discrepancies between two statements, both of which bear authenticity upon their faces. How are they to be reconciled? Gideon B. Smith, of Baltimore, (good authority by the way,) in a communication to the Baltimore Clipper, has put this matter in a more "understandable" light. He states, from actual observation, that locusts appear every seventeen years, in certain districts of country, and in like periods do not occur in corresponding years. But his communication to the Clipper, will be best understood, if given as we find it in that paper.—*Phil. Saturday Courier.*

THE SEVENTEEN YEAR LOCUSTS.

Messrs. Editors,—Your account of the seventeen year locusts, copied from the Richmond Whig, sent me into my note book, in which I find that this interesting insect will appear *during this month*, in Middlesex county, and the adjacent parts of New Jersey, at Poughkeepsie, and adjacent parts of New York and Massachusetts, and in Fauquier county, and adjacent parts south, in Virginia. I am under the impression, that the editor of the Richmond Whig will be disappointed in their appearing in the neighbourhood of Richmond *this year*. He shall be gratified however, in May, 1846, when the locust is to appear in Prince George's county, and adjacent parts, embracing, I expect, Henrico county, and of course, Richmond city. If the locust does not appear in the city of Richmond this year, it will add another district to the list, and I shall be much gratified if editors or postmasters, in the place indicated, or in any other place where they may appear this year, will send me information of the fact. I have now authentic proof of the existence of sixteen districts, in which these locusts appear respectively, every seventeen years, and perfectly distinct, and disconnected from each other. Gideon B. Smith.

Urine of Animals.—"The quantity of liquid manure produced by one cow annually, is equal to the fertilizing of one acre and a quarter of land—a space by far greater than is sufficient for her support, on the soiling system—producing effects as durable as do the solid evacuations. A cord of loamy earth saturated with this urine, is equal to a cord of the best rotted dung. If the liquid, and the solid evacuations, including the litter, are kept separate, and then, soaking up the liquid with loamy earth, it has been found they will manure land in proportion, by bulk of seven liquid to six solid, while their actual value is as two to one. It has been calculated that 100 pounds of the urine of cows afford 35 pounds of the most powerful salts ever used by farmers. The simple statement then in figures, of difference in value of the solid and liquid evacuations of a cow, should impress upon all, the importance of saving the last, even if it be in preference to the first."

A Gem.—Give us such boys as have been blessed with the instructions of a pious mother. This qualification for which no substitute can be found on earth. Never would we despair of the child who has been used in his infancy, to hear the precepts of heavenly truth inculcated in the accents of maternal love. Truths thus distilled, live forever in the memory. They are interwoven with all the sensibilities of the soul. They are the fortress of conscience, not impregnable, it is true, but indestructible. They furnish the mind with chords which, in later life, seldom fail to vibrate to the touch of faithful expostulation. They are as inextinguishable sparks, which being seemingly smothered under a heap of corruption, may be fanned by the breath of friendly and spiritual counsel, into the pure and genial flame of piety.

Jones' Multiplying and Equalising Bee-Hive.

To the Editors of the Cabinet,—Increased attention has, within a few years, been given to the raising of bees—by some as a source of pleasure and amusement, and by others as one of profit; and among them all, there has existed a variety of opinions in relation to the manner of treatment that would be the most successful, and as a natural result, many different kinds of hives have been constructed, some of which seem to have the recommendation of a correct theory.

In the construction of a bee-hive, the objects which seem to the writer most desirable to be gained, are simplicity and economy of construction, in such a manner as to save the time, trouble, and labour, of watching and hiving bees; afford the best protection against the intrusion of the moth or miller; save the increase of the bees; keep the swarms equal; make them most secure against robbing; change the comb before it gets to be so old as to injure the health of the bees; save all the labour of the bees during the working season—which is but short—and have an opportunity to take away at pleasure, a portion of the best honey, without any injury whatever to the swarm.

Jones' "Multiplying and Equalising Bee-hive," enjoys a pre-eminence over all others—from its construction—to accomplish the above-named objects. It is simple, and may be made either plain or ornamental. It has two equal parts, which when joined, make the whole size of the hive 21 inches, from the top to the bottom; 19 inches in breadth, and 10½ in depth. It divides perpendicularly in the middle, and the bottom of each part, may be so graduated as to make the aperture for entrance large or small, as necessity may require, and in the upper part, about six inches perpendicular, are partitioned off, so as to make room for the boxes or drawers, in which the bees deposit the best honey, which may be taken out when they are full, and others supplied. Its advantages and the manner of treatment, I cannot now give in detail, and therefore must be brief.

When a fulness occurs, or the bees show indications of swarming, the hive is to be taken in the evening, when the bees are all at home, and divided, and an empty half added to each full half, when the bees will immediately commence working to fill the empty half; and you have, in fact, accomplished all that was necessary in swarming, as you have two swarms which are nearly equal in size, and with comparatively a very small amount of labour. The increase is made sure, and the swarms equalised, and they will be much more profitable to the owner than when they swarm, and are hived in the old fashioned way. It affords greater protection against the moth than any other kind of hive, and for this reason, when a swarm leaves the old hive, they always take more than half the quantity of bees, and frequently swarm again in three to ten days, when the quantity of bees in the hive becomes still further reduced, and the comb unprotected; then the miller enters and deposits its eggs, which soon hatch into moths, and destroy the swarm, and no construction of a hive can prevent their entering: the only protection is to have the comb well covered with bees—all apiarians agree that a strong swarm is not liable to danger from the intrusion of the moth—which Jones' hive effectually secures—as the same bees and the same quantity, occupy the same comb after division that they did before, so that no part is left uncovered. The bottom may be closed during the robbing season, so as to leave the aperture so small that but two or three bees can pass in and out at a time; which aperture they can easily protect. By the process of division, one portion of the comb is always new, and when one part gets to be three years old, take the hive as late as the 20th of July, divide as for swarming, and add an empty half to the new part, lay the half containing the old comb near by, and rap on it until the bees leave and return to the hive, which they will readily do, if the comb be old.

It not unfrequently occurs that swarms in the old fashioned hives, hang upon the outside of the hive some days before swarming, and sometimes they hang out for weeks, and sometimes for the whole season, without swarming. By the division of Jones' hive, a vacancy is made, and they immediately commence work to fill it, and thus save the labour during the best part of the season, which is so frequently lost. The boxes or drawers at the top, are made so as to hold about eight pounds of honey, and may be removed when they are full, or sooner if desirable. Y.

To propagate a choice kind of potatoe from a single bulb, it is but to plant it in a moderate hot-bed, and strip off the shoots as they appear, placing each in a single pot for a season, and then plant the whole abroad; more than sixty large plants producing a full crop, have been thus raised from a single bulb, in one season.

Pursuit of Knowledge.

We have the testimony of the wisest men that have lived, that toil is the price of knowledge. Sir Isaac Newton says, that to patient industry he owed whatever of knowledge he had acquired; and the present wonder of our country, Elihu Burritt, the "learned blacksmith," who, at less than 30 years of age, had already learned, more or less perfectly, fifty different languages, and studied various branches of science, says: "All that I have accomplished, or expect, or hope to accomplish, has been and will be by that plodding, patient, persevering process of accretion which builds the ant-heap, —particle by particle, thought by thought, and fact by fact." The Rev. John Todd, in his *Student's Manual*, a work that every seeker of knowledge should read, very appropriately remarks:—"Those islands which so beautifully adorn the Pacific, and which, but for sin, would seem so many Edens, were reared up from the bed of the ocean by the little coral insect, which deposites one grain of sand at a time, till the whole of those piles are reared up. Just so with human exertions. The greatest results of the mind are produced by small but continued efforts. I have frequently thought of the motto of one of the most distinguished scholars in this country, as peculiarly appropriate. As near as I remember, it is the picture of a mountain, with a man at its base, with his hat and coat lying beside him, and a pick-axe in his hand; and as he digs, stroke by stroke, his patient look corresponds with his words,—*Peu et peu*— 'little by little.'"

He who expects that, by waiting, he will be able to rise by some bold stroke, will probably resemble at last the countryman who loitered on the river bank, hoping that the stream would exhaust its waters. But the young man who believes that knowledge is worth possessing, and is willing to apply his energies, has much to encourage him. He may point to some of the brightest ornaments of the nation, and of the world, and tell of the time when they were poor and obscure. Roger Sherman was a shoemaker, and was encumbered with the care of his widowed mother and helpless family; yet he became deeply skilled in mathematics, afterwards read law, was appointed a judge, and rose to eminence as a jurist and politician. It has been remarked of him that he never said a foolish thing in his life. General Greene, the favourite of Washington, was a blacksmith; and had only the elements of an English education given him. "But to him, an education so limited, was unsatisfactory. With such funds as he was able to raise, he purchased a small but well selected library, and spent his evenings and all the time he could redeem from his father's business, in regular study." Benjamin Franklin, it needs scarcely be said, was a practical printer; and emphatically the artificer of his own fortune. Rittenhouse, who was pronounced second to no astronomer living, was a farmer in early life; and it is said that when a boy, the smooth rocks in the field, and the fences by the way-side, were often covered with his arithmetical calculations. He became eminent as an astronomer and mathematician. Nathaniel Bowditch, the celebrated navigator and scholar, was poor, and enjoyed few opportunities in youth to acquire education; all his science and his fame were the fruit of persevering application. Who was Fulton, whose inventions in the applications of steam power, have added millions to the wealth of our country, and especially of the West? And who was Whitney, the inventor of the cotton gin, by which the wealth of the South was doubled?

Let the industrious student read his country's history, and he will find there are few of its eminent men, but have risen to greatness without the inheritance of fortune's favours. And among the living, he will find labourers and mechanics standing conspicuous in our deliberative assemblies. Youth should study too, that they may make useful and respectable private citizens; for such as seek to store their minds with useful knowledge, and who train their reasoning powers to think efficiently, will rise, notwithstanding the frowns of fortune, if they are true to themselves, and correct in their moral deportment. When we look around upon our substantial farmers, master mechanics and prominent citizens, how large a portion were poor boys! while the worthless and dissolute are often those who commenced life under favourable auspices.

But there are difficulties in the way! Thousands would rejoice to be learned, were it not for the toil. They would gladly enjoy the gratifications that wealth affords, but they are unwilling to labour for the prize. Think you that the men we have named, rose to distinction without effort? Or rather, did they not climb the ascent step by step? Burritt, to whom we have already alluded, is not merely a blacksmith by profession, but a daily labourer for eight hours at the anvil. William Cobbett was once a common soldier, and afterwards a member of the British Parliament. He says of himself: "I learned grammar, when I was a private soldier on the pay of six-pence a day. The edge of my berth or my guard-bed, was my seat to study in; my knapsack was my book-case, and a bit of board lying on my lap, my writing-table. I had no money to purchase candles or oil; in winter time it was rarely that I could get any light but that of the fire, and only my turn even of that. To buy a pen or a sheet of paper, I was compelled to forego some portion of food, though in a state of starvation. I had no moment of time that I could call my own; and I had to read and write amid the talking, laughing, singing, whistling and bawling, of at least half a score of the most thoughtless of men; and that too, in the hours of freedom from all control. And I say, if I, under circumstances like these, could encounter and overcome the task, is there, can there be, in the whole world, a youth that can find an excuse for the non-performance?"

Youth are apt to err in attributing too much to genius and favourable opportunities. There certainly are grades of intellect, and with similar opportunities all would not succeed equally; it is likewise true, that wealth may buy advantages; but it often brings its disadvantages. It leads youth to rely too much on their opportunities; and the mind lacks the energy which adverse circumstances generally impart. The young man who relies on his genius and college facilities, will not be apt to distinguish himself by his attainments. Let the youth who is ready to despond, turn his attention to biography. He will there learn what man has done, and he knows our motto. We would recommend to his attention an excellent book, entitled, "*The Pursuit of Knowledge under Difficulties*." It has been republished in this country, and the Rev. Francis Wayland, has promised a volume of American characters. The reader may learn from these books, the difficulties under which others have laboured. He will find poverty, sickness, and physical misfortune opposing in vain. Sanderson, and Euler, and Milton were blind; but did they waste their time in idle repining? Who can peruse their memoirs without a thrill of admiration?

It is related of a gardener, who had learned much by solitary application, that, on surprise being expressed that he should understand *Newton's Principia*, he exclaimed, "Can I not read? And if I have books what more do I want?" We find even the deaf and dumb becoming profound scholars; what excuse then can he have, who can hold free communion with his fellows? And there is Laura Bridgman, now in the Massachusetts Asylum for the Blind, who can neither *see*, *hear*, nor *speak*, and her sense of *smell* is very imperfect; and yet she has learned the use of language, so as to convey her ideas and learn the wishes of others. It is all a great error for a young person to think that because he is not healthy, or has not leisure and books, and learned professors to instruct him, that therefore he cannot learn. Too many books are often a great disadvantage, by distracting the attention and preventing close application. A small, *well selected* library, is better for the student than a great variety of books. The text books should be studied very closely, very intently and perseveringly; it is not sufficient that they be read once. The ancients had a maxim to convey their confidence in the effect of this mode of application; "Beware of the man of one book." He whose reading is light and various, seldom thinks closely, and none need fear him in argument.

How am I to think? Be assured that to make thinking effectual, it must be diligent, undivided, concentrated. One great object of education, I might say *the* great object, is to acquire this mastery over the mind; the amount of knowledge stored up, is a matter of secondary importance. He whose mind is disciplined, can at any time add to his stock; he can learn facts, and reason upon them; but he who has not learned to think properly, is in danger of exhausting his stock. The mind of one is a living spring, of the other, a mere cistern that may be filled and emptied. The mechanic acquires manual dexterity in using tools, by long practice and patient training;—the mind of the thinking man, is the power by which he operates, and the dexterity with which he can use it, depends upon the power he has acquired to concentrate its efforts and direct its energies. The habit of trifling, instead of studying, is fatal to improvement; and though the doctrine of applying the birch to quicken the ideas, is less popular now than in times past, there may be persons who need physical stimulus to keep the attention excited. But this necessity cannot long exist, unless with the wantonly perverse.

The American boy has much to encourage him; for the wide field of preferment is open before him, and, earlier or later, merit is apt to be rewarded. Let him remember that though but a boy now, a few years will place him in a different relation to those around him; and these years may be idled or improved. If idled, the ignorant boy will be an ignorant man; but if improved, the ignorant boy may become the intelligent, useful, eminent man. Consider the truth contained in our first motto, "What man has done, man may do;" and then fearlessly and with full and persevering purpose of heart, practise the resolve, "I will try."—*Parke's Philosophy of Arithmetic.*

For the Farmers' Cabinet.

Lime, a Stimulant.

Admitting to the fullest extent, all that has been advanced by way of eulogium, in the use of lime as a fertilizer, a neutralizer, and a sweetener, I have been accustomed to view it in another light, which has with me, the sanction of experience. I find it the strongest of all stimulants, rendering what was sluggish and inert, quick and volatile, producing a vigor of growth in the plant, often astonishing. And I have compared this result to the stimulating effects of ardent spirit upon the human frame, which is sure to bring out all the vigor that is in it, enabling it to perform prodigious labour, and sustain, for a while, the greatest bodily exertion. But, unfortunately, the parallel holds still further, for like it, the effects are but momentary, and when the unnatural stimulus is expended, a lassitude is felt, in exact proportion to the excitement that had been administered. And this is a law of nature which must be obeyed, before an equilibrium can again be brought about.

Now, reasoning from analogy, must not the same deleterious effects that are observable in the man addicted to the use of ardent spirit, follow a too copious use of lime in the soil? And does not this consideration account for the fact, that in Devonshire, where far more lime is used than in any other part of England, the average produce of grain is much lower than on any other of their soils of very inferior natural quality? It would therefore appear, by parity of reasoning, that lime should be followed by something for it to feed on, namely, barn-yard or other substantial manures, that add staple to the soil, and counteract the too stimulating effects of an over-dose of lime; an article better calculated to produce grass than grain. A man accustomed to take alcohol on an empty stomach, soon finds himself in a woeful state of exhaustion; quite unable to sustain even a moderate share of exertion for any considerable length of time—would it be allowable to apply the same mode of reasoning to the system of liming to excess?

It is asked, with much deference, what would be the results of an extra pulverization and thorough working of the soil, by fallowing on proper occasions? Would the system operate precisely in the way in which lime is said to act, in sweetening the soil, neutralizing its acidity, and adding to its fertility, by repeatedly exposing it to the action of the air and rain, and the influence of the sun—effects, which it is averred, would be found of the most lasting benefit, and causing an evenness and regularity in the crop, so necessary to its full developement.

Was Jethro Tull acquainted with the use of lime? R. D.

Montgomery co., Pa.

Salting and preserving butter.—We annex a receipt upon this subject, and will take this occasion to say, that we have no doubt it is a good one, though we should prefer one we have used and *know to be good.* The paragraph below states that butter, packed away as therein directed, will keep ten years. Upon this part of the subject we cannot speak from any knowledge of our own; but with regard to the time it will keep, put away agreeably to the receipt we shall give, we are enabled to speak advisedly, as our butter was potted in the month of June, and was as fresh and sweet when opened for use, in the month of December following, as when first made, having preserved all its richness of flavor.

We took six ounces of fine Liverpool blown salt; four ounces of saltpetre—and six ounces of loaf sugar; and after pulverizing the whole, so as to make a fine powder, we incorporated it with the butter, after the buttermilk had been thoroughly worked out, at the rate of one ounce to the pound, then packed it away in stone jars, the tops of which we covered, first with clean cloths, and then with bladders, so as to completely exclude the air. Thus treated when fresh and well made, we have no hesitation in saying, that butter would keep any desirable length of time, though we should be unwilling to risk the opinion that it would keep, as maintained in the receipt below, ten years:

To salt butter.—Beat well up together in a marble mortar, half a pound of common salt, with four ounces of powdered loaf-sugar; to every pound of newly made butter (the milk being well drawn off by beating) put an ounce of the mixed powder, incorporate it well; put the butter in pots for keeping. In about a month—not before—it will be fit for use, and it will continue for ten years as good as butter newly salted.—*American Farmer.*

Salt your Cows.—All cattle need more salt when they are first turned to grass than afterwards. Let them have access to it twice a week, in May and June.

Experiments in making Sugar from Corn-stalks.

The following, taken from the minutes of the transactions of the French Academy of Science, we copy from the American Farmer. It will be read with deep interest.

"At the sittings of this body in September last, a series of reports and researches was submitted by M. M. Biot and Soubeiran, on the subject of making sugar from Indian corn. It seems that, as far back as 1834, M. Pallas placed before the Academy an account of his having extracted two per cent. of sugar—entirely like that of the sugar-cane—from the stalk of the maize. M. Robiquet again reported upon Pallas's communication, suggesting that the greatest yield of sugar could probably be obtained immediately after the flowering of the plant, and that its quantity would be greatly lessened when the grain began to be completely formed. In 1839, M. Pallas again communicated experiments as to the effect, on the saccharine qualities of maize, of removing the ear at several stages of its growth. Upon this paper, Messrs. Bouissingault and Biot again reported, pointing out the defects of M. Pallas's experiments, and indicating the proper method of investigating the matter.

"We give this little sketch of the progress of this conversion of maize to the purpose of furnishing sugar, as interesting to those who, in this country, are prosecuting the same object. Monsieur Biot's last paper is to the following effect:

"'The stalks upon which they operated, were taken from the Jardin des Plantes. Some of them had been separated from their heads; others had not. They report that the sugar of maize is precisely that of the sugar-cane, mixed, however, with a small quantity of sugar of fecula. The juice of the maize, which had been castrated, contained per litre, 113 grammes, or 12 per cent. of sugar; that of the non-castrated, gave 124 grammes, or 13 per cent. These experiments prove that castration is rather injurious than otherwise, and that if maize is to be used for this purpose of extracting its sugar, it must be in its normal state. Whether this new industry on an extensive scale, would be a profitable one, is a question which, at the present moment, may be matter of dispute; but there is one consideration in its favour, supposing the productiveness of the maize to be such, if cultivated to the necessary extent, as to render the cultivation of the beet-root unnecessary. The latter must remain on the ground during the whole of the summer, and the moment of harvest is too near that of the winter-sowing for corn, to leave time to prepare the ground for receiving the new seed. Maize, on the contrary, runs through all the phases of vegetation in a few months, and it can be gathered in, as it is not necessary to leave it on the ground until it has attained to full maturity, and sufficiently early to have abundant time to prepare the ground for the winter corn-seed. M. Thenard, one of the members of the Academy, alluding to that part of the report of Messrs. Biot and Soubeiran, in which it is stated that there is a small quantity of sugar of fecula, mixed with the cane sugar of the maize, observed that the beet-root contains crystallizable sugar, unmixed with sugar of fecula, and that probably the presence of the latter in the experiments made on maize, was due to the mode of manipulation, and that it does not exist naturally in the plant.'"

For the Farmers' Cabinet.

Cone's Dynamometer.

Messrs. Editors,—I find in the "American Agriculturist" the description of a cheap, simple and effective Dynamometer, which is said, upon trial, to have satisfied every one as to its accomplishing all that could be desired. It is as follows:

"Take the beam of any patent scales that will weigh 10 or 12 cwt., suspend it by the upper hook, and put sufficient weight upon the lower hook to balance the beam; then hang upon the small end, a one pound weight, and put sufficient weight upon the lower hook to balance, and ascertain the number of pounds on the lower hook, requisite to balance the one pound: the beam used by Mr. Cone, required 32 lbs. on the weight-hook to balance one pound on the small end. Now, hitch the lower hook to the clevis of the plough, and the team to the upper hook; the small end of the balance or beam, running out upon the land-side at right angles to the plough; and from the small end of the beam, bring a wire near to the handle of the plough; attach to this wire the upper end or hook of a common spiral balance, and make the other end of the balance fast to the plough, when the spiral balance becomes the index to the force required to move the plough. Thus, if the index of the balance marks 14 pounds, then the force exerted on Mr. Cone's scale would be, $14 \times 32 = 448$ lbs. The principle is perfect; the only thing necessary, is to hit upon some plan to have them uniform throughout the Union.

In applying it to a plough, it should be so constructed as to work perpendicularly, instead of horizontally; and this could be done, by having a guide made fast to the beam of the plough, in which the beam of the Dynamometer should play; the balance could then be made fast to the upper slat or round of the plough, and be more convenient for observation; and besides this, it would not be affected by inequalities on the surface of the ground."

The thing certainly appears very feasible, and I hope that some of your intelligent readers will put it to the test of a careful and rigid examination, and report upon it in the pages of the Cabinet; its simplicity recommends it strongly to the notice of every one of our agricultural friends, and it is a subject that demands their most serious regard, as being the only mode, *in the absence of the power of speech in our teams*, by which the *tremendous* difference which exists between the draughts of different ploughs, can be exhibited or explained. C. W.

Warren co., N. J.

Our correspondent's remark reminds us of a late conversation with Mr. H. Roberts, of Spring-Mill, Montgomery county, after a trial between the Centre-draught plough and one of Dickinson's—the plough, it will be remembered, that took the premium at the last Philadelphia Agricultural Society's ploughing match: He said, "the land at last got so hard that my small horses could no longer work the Dickinson plough; my brother, therefore, gave me the Centre-draught plough, No. 5, and took the Dickinson, when my horses walked away with it, almost as though they had nothing after them: but when my brother started his strong team with the Dickinson plough, they stopped and drew up, as though they had met with an obstacle; nor would they move it until they were urged." Here was a living Dynamometer, that spoke the truth, without the possibility of any mistake. J. P.

Daguerreotype.

The following is a general description of the art of the Daguerreotype, as practised by its distinguished inventor: A plate of silvered copper, after having been well cleaned, and freed from any greasy substance, by polishing it with dilute nitric acid, fine tripoli, or colcothar of vitriol, is placed in a box containing iodine, till its surface is covered with a golden yellow film of that evaporable substance. The plate being carefully kept from light, is placed in the *camera obscura*, so as to receive upon its surface a distinct image of the landscape, or of the single figure, or group of figures, to be painted. After remaining a number of minutes, depending on the intensity of the light, the plate is taken out of the *camera*, and placed in what is called a mercury box. There it is exposed to the vapour of mercury, raised by a spirit lamp; and after a certain time, the operator, looking through a little window in front of the box, observes the landscape, or figures, gradually developing themselves on the surface of the plate, by the adhesion of the white mercurial vapour to those parts of the picture which had been acted upon by the light. When the developement appears complete, the plate is placed in a vessel containing either a saturated solution of common salt, or a weak solution of the hyposulphite of pure soda. By the action of either of these fluids, the coat of iodine is dissolved, and the picture is permanently fixed. It is then simply washed in distilled water,—dried, and placed in a square of strong pasteboard, covered with glass. If we now carefully examine the picture thus produced, we shall find that its shadows are nothing more than the original polished surface of the silver, reflecting a dark ground, and that the lights are the parts of the silvered surface, which have been more or less whitened by the vapour of mercury. If the plate is made to reflect a luminous surface, such as a white dress, or the sky, the shadows will appear luminous and white, and the lights dark, so as to give what may be called a *negative* picture. In this remarkable representation of nature, there is depicted, with the minutest accuracy, all her finest forms; but her gay colours are wanting; and the blue sky, and the green turf are exhibited in the same monotony of light and shadow, as when we view a highly coloured landscape, in water colours, or in oil, by the light of a monochromatic lamp.—*Edinburgh Review*, *Jan.*, 1843.

Cast-iron Buildings.

We take the following from the January number of the Journal of the Franklin Institute.

"A correspondent of the Times, says:—Buildings of cast-iron are daily increasing, at a prodigious rate in England, and it appears that houses are about to be constructed of this material. It is proposed that the walls shall be hollow, so that the whole house may be heated by a single stove in the kitchen. A three-story house, containing 10 or 12 rooms, will only cost about £1000; and it may be taken to pieces, and removed to another place, at an expense of about £25. It is understood that a large number are about to be manufactured, to be sent to Hamburg, for those who have had their habitations burned."

A heart properly disciplined, will enable the head to accommodate itself to whatever pillow the vicissitudes of fortune may place under it.

For the Farmers' Cabinet.

The Silk Culture.

At length we have something novel in the way of silk culture. A Mr. Gill, of Ohio, has patented a process and apparatus, that appear likely to render much more secure, if not certain, the labours of the cocoonery during the last stages of operation; the failures attendant upon which, have been found so ruinous heretofore. His plan is, to feed the worms after their second moulting, in tents; to *fan* them when the weather is unhealthy, and to *rock them in cradles.* The account published by Mr. Gill is so curious, and withal so natural, that I am desirous to see it preserved in the pages of the Cabinet. He says;—"My operations in feeding and manufacturing during the last year, have furnished employment for about fifty hands on an average; and I have manufactured in that time, upwards of $9,000 worth of silk goods, consisting of all the varieties of staple silk in demand, equal to any imported; and sold them readily at a reasonable advance on their cost of production and manufacture; and my efforts have been crowned with complete success. In the past five years of my operations, I have frequently met with failures, and occasionally entire loss of worms from extremely warm, close and confined weather, *but never from cold.* I have tried all the plans of feeding and ventilating used or known in the United States, but found them all deficient in accomplishing the object desired; but by studying the subject—the nature, habits and wants of the worms, I have been enabled to adopt a plan which meets every important object. I shall feed very extensively on it the coming season, and fully believe that my invention will work as complete a revolution in the growing of silk, as the discovery of the gin has in that of cotton. I have named my invention, 'Gill's Patent Feeding Tent, and Silk-worm Ventilating Cradle.'

"These tents and cradles may be constructed of any size, and of any materials suitable, keeping in view the principles of construction. I adopt, as a convenient size, a tent 15 feet wide, and 50 feet long; side posts, four feet apart, driven into the ground, and standing six feet above it, each side: for centre posts, eight feet apart, driven into the ground, and standing eight feet above it, which gives two feet pitch to the roof. The ridge and eaves-poles to be fastened along the tops of each of these three ranges of posts. The tent cloth to be of linen, or any other fabric suitable, and impregnated with paint, tar, &c., if desired. The linen covering is most convenient in breadths of 10 feet; to extend from the bottom on one side, over the top or ridge of the building, and down to the bottom on the other side, with weight-poles or rollers, at the bottom on each side, so that the tent cloth may be rolled up to any height, to give free circulation of air, or exclude it, with rain or sunshine, at pleasure. The rollers of cloth should, when down, reach to within six inches of the ground, with a drain under them, to carry off the water: the ground forming the floor.

"The feeding ventilating cradles are constructed to embrace the following principles, and of sizes to suit the breadth of the tents, leaving an aisle along the centre of the room, and between each cradle. To furnish a tent 15 feet wide, the cradles should be 12 feet long, and have three rockers four feet long, made of plank 15 to 18 inches broad, and about one and a half inch thick; with a trough resting across their centres, let in by a notch in the rockers, 12 feet long, one foot wide, and one end closed. From the points of the rockers attach upright posts, 30 inches long, inclining outwards, and a cap attached to their tops on each side, parallel with the trough. To this cap and side of the trough, attach laths one-eighth of an inch apart, the whole length of the trough, on both sides, so as to form when finished, a rack about two and a half feet deep and five feet wide at the top; and across the trough fasten slats about one foot apart, on which to lay the mulberry branches, and on these branches put the worms, after their second moulting, or when about half grown, and feed them until they spin, with branches with their leaves on, cut about one foot long. Suspended over each cradle, is a fan made of bonnet-boards, or any other thing suitable, with a pendulum, coming down from the shaft which is across the tent in two of the upright posts; this pendulum, the person who attends the feeding, can put in motion, which also rocks the cradle; thereby removing all impure air about the worms, and shaking down the dry leaves, litter and excrements into the trough, into which a bucket of water is occasionally poured at the upper end, and all is washed out at the lower or open end, leaving it pure and clean. The motion of the cradle is agreeable to the silk-worm, approximating to the waving of the branches while feeding on the trees in a state of nature. Another important advantage is, that no worms can fall through to the ground, and those that happen to fall down in the brush, crawl to the lath sides, and mount easily to the top. They also readily spin among the clean, bare brush, making but little floss, and seldom double cocoons. A fender made of tin, or any other suitable material, is affixed to the rockers, that prevents mice, ants and other insects from ascending to the worms. The plan throughout is simple, cheap, and easy of application; it curtails the expenses more than one half, and more than doubles the quantity and quality of silk from a given quantity of eggs."

The plan appears feasible and easy of adoption. At first there would appear a danger of the tents suffering damage from the effects of storms, but their use would be confined to a short space of time; as it is to be understood, I presume, that the worms are to be reared to half their growth in other buildings, and be transferred to the cradles, there to remain until they spin; when, at the end of the season, the tents could be taken down and packed carefully away for another year; this is no doubt an economical plan, the re-erection of a tent being the labour of an hour or two only; and a situation might be chosen most convenient to the business, perhaps in the plantation, to save the labour of carrying the branches to a distance. It is calculated, that a tent 50 feet long by 15 feet wide, would contain six cradles of 12 feet in length, and that each cradle would feed 15,000 worms. Mr. Gill proposes to dispose of individual rights for three bushels of merchantable cocoons, or ten dollars cash. J. C.

For the Farmers' Cabinet.

Bone Dust, &c.

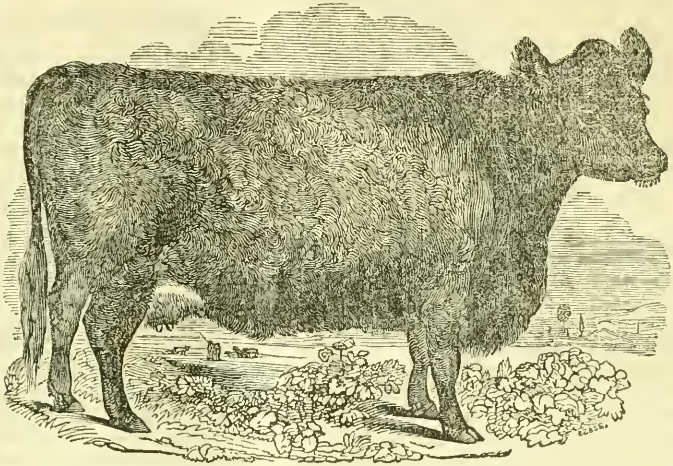
Some two years since, I became thoroughly convinced of the great value of bone manure, so much so, that I only wished to know the best mode of applying it, and then would purchase no other. I also wished to know whether the ground bones, or the sawings and turnings of the button makers, were the best; accordingly, I bought from three different persons, as many kinds, at 16 to 45 cents per bushel, near 300 bushels, which I applied from the 1st of Fourth month, until the latter part of Eighth month, at the rate of 10 to 40 or 45 bushels per acre, on orchard grass sod, timothy, and clover of the first, second, and third years' growth; on wheat and turnips broad-cast; and on potatoes, corn, pumpkins, peas, beans, onions, celery, radishes, strawberries, and other things in the hill and drill; and have anxiously waited ever since, without saying, and for obvious reasons not wishing to say, anything against it; but have now come to the conclusion, that the same bulk of good stable manure would have done more good to the crops and the land; for I cannot even now, see any difference in the appearance of the present crops of grass, where it was sown last year on the wheat, and on other different pieces of grass. It is certainly not a profitable manure for my farm, either on the clay, loam, or sandy part; what the reason is, I leave for wiser heads to determine. My principal reason for making the present communication, is to caution others from going quite so deeply into it at first, as I did, but try a smaller quantity, and in the meantime, let the bones go to England, or to those whose soil they may suit.

I find that glue dung is the cheapest manure I can purchase; my manner of using it is to mix and ferment it with stable manure, in the proportion of about one-third of glue dung with two-thirds of other manure, and turn it over twice, then apply it in the usual way. Spent, or soapers ashes, I have also used with very good success; harrowed in with oats, clover and timothy, on a loamy clay—four two-horse wagon loads per acre.

I am quite disappointed this spring, in my observations as to the manner in which the cut-worm makes its appearance in the corn. I always supposed the egg was deposited in the ground, and remained there during the winter, and from which the worm was produced in the spring, in time to make its ravages on the corn. My corn field this year, was a stiff sod of blue grass and timothy, and I expected the worms would be bad in it; accordingly I commenced searching for them as soon as the corn was fairly up, and found them in many cases completely covered, except at top, in a web or cocoon, immediately by and attached to the corn, just under the surface of the ground; I have destroyed hundreds of them found in this way, which proves to my mind, that the eggs must have been deposited there only a few days before. There are various things recommended to prevent them from injuring our grain, but I have found the Frenchman's plan most successful, as recommended to destroy fleas; "first catch them." The proposal to plant onions in the hills with the cucumbers, to prevent the striped bug from attacking them, has with me, proved a total failure, as most of the hills have been destroyed, either wholly, or in part. S. S.

Spring-Wood Farm, Sixth mo. 1st, 1843.

That man is far behind the spirit of the age, who follows any system of husbandry or agriculture, merely because his father followed it before him, and without looking into the reason or propriety of it, or reflecting on its susceptibility of improvement. It is not reverence for example, but ignorance of improvement, that influences a man to do so.—*Maine Farmer.*



THE GALLOWAY COW.

THIS cut contains the portrait of a beautiful Galloway cow, belonging to Mr. Gurney. There is, perhaps, no breed of cattle which can be more truly said to be indigenous to the country, and incapable of improvement by any foreign cross, than the Galloways. The Short-horns, elsewhere, have improved the cattle of the districts to which they have travelled; they have, at least in the first cross, produced improvement, although the advantage has not often been prolonged much beyond the second generation; but even in the first cross, the Short-horns have done little good in Galloway; and as a permanent mixture, the choicest of the Southern bulls have manifestly failed. The breeders in that county, are now, therefore, perfectly satisfied that their stock can only be improved by adherence to the pure breed, and by care in the selection. It has been remarked in this, as in other breeding districts, that cows and heifers of good quality, are to be met with everywhere, but that it is difficult to find a Galloway bull free from defect. Too many breeders have become careless from this circumstance, and have contented themselves with a bull of moderate pretensions; and the form and value of their cattle have thus been depreciated, yet not to the extent that might have been expected, for the imperfections of the sire do not always appear in the progeny; the sterling characteristics of the Galloway cattle often breaking through, although obscured in one generation; and forming a strong argument in favour of that grand axiom in breeding—"dam the best."

The Galloway cows are not good milkers; yet, although the quantity of milk is small, it is rich in quality, and yields a large proportion of butter. A cow that yields from 12 to 16 quarts of milk per day, is considered a very superior milker, and that quantity will produce more than a pound and a half of butter; but the average milk of a Galloway, cannot be reckoned at more than six or eight quarts per day, during the five months after feeding her calf; while during the next four months, she does not give more than half that quantity; and for two or three months she is dry. The Galloway cattle are straight and broad in the back, and nearly level from the head to the rump; round in the ribs, and good between the shoulders and the ribs, and the ribs and the loins; broad also in the loin, without any projecting hook-bones; in roundness of barrel and fulness of rib, they will compare with any breed whatever; and when viewed from above, the whole body appears beautifully rounded, like the longitudinal section of a roller. They are also long in the quarter and rib, and deep in the chest, with less space between the hook, or hip-bones and the ribs, than in most other breeds; a consideration of much importance, the advantage of length of carcass depending on being well ribbed home, or as little space as possible lost in the flank.

Cheese Making.

The Journal of the French Academy of Sciences, contains the following communication, read by M. de Romanet.

It has been frequently remarked with surprise, by persons unacquainted with the circumstances, that the French, although possessing rich pasturage, and all the other apparent means of operation, should be tributary to Switzerland, England, and other countries, for the better sorts of cheese consumed in France. Why, it is asked, should they go to England for Cheshire cheese, and to Switzerland for Gruyere? The answer is, because in France property is so divided and sub-divided, that there are no dairies on the extensive scale required for carrying on this branch of rural manufacture with success. But it will be again asked, if the divisions of property are so numerous in France, are they not equally, or even more so, in Switzerland, and yet the cheese trade is a continued source of wealth in that country? This question brings us precisely to the main point of M. de Romanet's paper. In Switzerland, until of late years, the making of Gruyere cheese was limited to a few wealthy persons; for as it was necessary, for the quality of the article, that the cheese should be very large, and that the milk should be coagulated on the day of its being taken from the cow, it was only by keeping a large number of cows, that the manufacture of Gruyere cheese could be carried on. The owner of one, two, or three cows, was, therefore, unable to profit by the demand for this particular kind of cheese in foreign countries. At length, however, an ingenious mode of enabling the poor peasantry to compete with the more wealthy, was hit upon. It was proposed to establish a cheese-dairy upon a joint-stock principle; to keep an account of the quantity of milk delivered by each person, and to apportion the profits arising from the sale of the cheese, to the different contributors, according to the amount of their contributions. The idea was carried into execution, and has become general in Switzerland. M. de Romanet proposes that the plan should be tried in France. It could not fail to be successful, for how many peasants are there keeping only one cow, who are unable to dispose of the milk to advantage. In this way, a constant and regular market could be secured, and the dairy-keeper, to whose care would be entrusted the interests of the mass of contributors, would be able to give the fullest extension to the arrangements which are necessary, in order to compete successfully with the wealthy agriculturist.

For the Farmers' Cabinet.

The Alderney Cow.

This little animal has long been valued and sought after for family use; for which her quiet disposition and her abundant supply of fine cream, particularly qualify her. Several have lately been brought from Europe, by gentlemen, probably not aware that they can be obtained at half the expense, within 20 miles of Philadelphia; retaining all the good qualities, and even the colour of their progenitors—the two dun cows imported by Mr. Sims, more than thirty years ago.

We have lately been told of one of these in the possession of Mr. Charles Duval, of Germantown, only three years old, whose milk is so rich, that from every seven quarts of it, one pound of butter is obtained. The trials have been frequent, under the inspection of Mr. Duval, and the result constantly the same. If, as is believed by competent judges, the quality of the milk improves as the cow advances in age—what may be expected from her a few years hence? She is not considered superior to others of the same family, and had she reached Germantown, after a perilous voyage across the Atlantic, and not after an easy journey of one day from the farm on which she was bred, her celebrity would be greater, perhaps, than it now is. T.

Bucks co., Pa., May 25th, 1843.

How to make money.—The Picayune thus instructs its readers, and the people generally:—Let the business of every body else alone, and attend to your own. Don't buy what you don't want. Use every hour to advantage, and study to make even leisure hours useful. Think twice before you throw away a dollar; remember you will have another to make for it. Find recreation in looking after your business, and so, your business will not be neglected in looking after recreation. Buy low, sell fair, and take care of the profits. Look over your books regularly, and if you find an error of a cent, trace it out. Should a stroke of misfortune come upon you in trade, *retrench*, work harder, but never "fly the track." Confront difficulties with unflinching perseverance, and they will disappear at last. Though you should even fail in the struggle, you will be honoured, but shrink from the task and you will be despised. By following these rules, however, you need never say "fail." Pay debts promptly, and so exact your dues—keep your word—take the papers—Advertise.

Neal's Patent Lard-candle Lamp.

This lamp is the invention of a gentleman in Ohio, who, being disappointed in the operations of all the lard lamps that he had seen, "inasmuch as they did not continue to burn brightly after the first few days of use, when the purer and lighter portions of the lard had been consumed; emitting a red and dingy flame from a fuzzy wick, with an unpleasant smell; requiring much attention and frequent cleansing, and leaving at the end of the burning, a portion of the lard so impure, as to be unconsumable; the trouble and inconvenience of filling, being also great"—succeeded, after much thought and labour, in constructing a lamp which he believes will be found to obviate all these objections; for by means of an air-tight plunger or follower, working in the chamber of the lamp, a portion of the lard is forced up through a tube, which has the form and appearance of a candlestick, into the flaming wicks of the lamp, where it is retained by pressure from below, until it is consumed, when more is sent up, by screwing down the plunger or follower, with the finger and thumb, in the neatest and most convenient manner imaginable. Thus the whole of the lard is consumed, leaving no residuum, and affording a white and brilliant light to the end.

For a considerable time we have had one of these lamps in operation, and are not able, after a strict scrutiny, to discover any imperfection in its construction. The lard in use is very inferior, the object being, a fair trial under common treatment; yet the light afforded is most brilliant, and at an expense much below the cost of oil. We therefore confess a preference for the lard-candle lamp; but lest this feeling should be thought to amount to a *prejudice* in its favour, we give below, the answer to an inquiry, which we addressed to an intelligent friend, who has had two of these lamps in constant use for many months, and would take the opportunity to recommend them to the notice of our readers. These lamps, made of Britannia ware, and of tin, are sold, the former at one dollar each, the latter at fifty cents; by Messrs. Filley & Kisterbock, Nos. 436, & 467, Market street, Philadelphia, with directions for use. J. P.

To the Editor of the Cabinet,—Dear sir, at your request, I send you the result of my experience in the use of Neal's Patent Lard-candle lamp. My acquaintance with the inventor extends no further than seeing his name upon the lamp in question, and my sole object in making this communication is, that the public may know the advantages to be derived from its use. By actual experiment, I have ascertained that the cost of an equal amount of light, is about one-third that of good sperm oil, while, with a flame of the same size, a stronger and purer light is emitted. The little trouble experienced in filling these lamps —the lard being put in cold—and keeping them in order for burning, is another advantage they possess, even over oil lamps, and especially over those lamps which require the lard to be first melted. A great objection to the ordinary lard lamps is, the difficulty experienced in getting them to burn well when first lighted; these lamps, however, burn with a clear and bright flame from the first. In burning it as a night lamp, my plan is, to use but one wick, cutting it off pretty close to the tube, and pressing down the piston or follower, until the cup at the top of the lamp is filled with lard; in this way it will burn eight or ten hours, without further attention.

Respectfully, E. W. Mumford.

Camden, N. J., June 29th, 1843.

JUST PUBLISHED, A SECOND EDITION OF THE

"FARMER'S LAND MEASURER

Or Pocket Companion;"

Showing at one view the Content of any piece of Land, from dimensions taken in yards;

With a set of useful Agricultural Tables, &c.

By James Pedder, Editor of the Farmers' Cabinet.

The publishers, induced by the success attending the sale of the first impression of this invaluable little work, and desirous of placing it within the means of every one engaged in the pursuits of agriculture, have determined to meet the exigences of the times, and issue a second edition at 37½ cents per copy. No work has ever met with more unequivocal marks of approbation: the concurrent testimony of the agricultural community is in its favour; it has, indeed, become the *Farmer's Pocket Companion*, and proved itself of the greatest assistance in the every-day walk of his profession, while the possessors of large tracts of land have especially learned the value of its aid "by its use," which could not have been appreciated but by the test of experience. To understand the mode of its application, requires the study of a few minutes only; the rules laid down for calculation, are within the range of the commonest capacity,—any one acquainted with the first rule in arithmetic, *Addition*, being competent to the task; for where is the farmer who cannot step three feet to a certainty?

It is published by Thomas, Cowperthwait & Co., Philadelphia, and sold by Kimber & Sharpless, No. 50, N. Fourth street;—at the office of the Farmers' Cabinet; and at D. O. Prouty's Seed and Implement Store, No. 176, Market street, Philadelphia.

Items in Domestic Economy.—Use Spts. of Turpentine to remove grease spots from clothes. It dissolves the grease, and then soap the more easily removes it. Grease may be removed from undyed woollen by a solution of pearl-ash.

Agricultural Exhibition, Sale, &c.

Premiums proposed by the Philadelphia Society for promoting agriculture, for the exhibition to be held on Wednesday and Thursday, the 4th and 5th of October, and the trial of ploughs to take place on Friday, the 6th, at the *Lamb Tavern*, (Thompson's,) on the Lancaster turnpike, one mile from the Schuylkill Permanent bridge.

HORSES.

For the best thorough-bred stud-horse,	$12
For the next best do. do.	6
For the best stud-horse adapted to the field and road,	10
For the next best do. do.	5
For the best thorough-bred brood mare,	10
For the next best do. do.	5
For the best mare adapted to the field and road,	10
For the next best do. do.	5
For the best horse colt, between two and four years old,	8
For the next best do. do.	4
For the best filley or mare colt, do.	8
For the next best do. do.	4
For the best horse colt, between one and two years old,	4
For the next best do. do.	2
For the best filley or mare colt, do.	4
For the next best do. do.	2

NEAT CATTLE OVER 2 YEARS OLD.

For the best Durham bull over three years old,	$12
For the next best do. do.	6
For the best do. between two and three years old,	10
For the next best do. do.	5
For the best bull of Devon blood,	8
For the next best do. do.	4
For the best Ayrshire bull,	8
For the next best do. do.	4
For the best Alderney bull,	8
For the next best do. do.	4
For the best bull of other improved breed,	8
For the best Durham cow over four years old,	10
For the next best do. do.	5
For the best do. between two and four years old,	10
For the next best do. do.	5
For the best Durham heifer between two and three years old,	6
For the next best do. do.	3
For the next best heifer of other improved breed, between two and three years old,	4
For the next best do. do.	2
For the best cow of Devon blood,	8
For the next best do. do.	4
For the best Ayrshire cow,	8
For the next best do.	$4
For the best Alderney cow,	8
For the next best do. do.	4
For the best cow of mixed blood,	6
For the next best do. do.	3
For the best yoke of working oxen, reference being had to their performance,	10
For the next best do.	5
For the best ox or steer,	10
For the next best do.	5

NEAT CATTLE UNDER TWO YEARS OLD.

For the best Durham bull between one and two years old,	$8
For the next best do. do.	4
For the best bull of other improved breed,	6
For the next best do. do.	3
For the best Durham bull calf between four months and one year old,	6
For the next best do. do.	3
For the best Durham heifer between one and two years old,	6
For the next best do. do.	3
For the best heifer of other improved breed, do.	4
For the next best do. do. do.	2
For the best bull calf of improved breed, between four months and one year old,	4
For the next best do. do. do.	2
For the best Durham heifer calf between four months and one year old,	6
For the next best do.	3
For the best heifer of improved breed, do.	4
For the next best do. do. do.	2
For the best steer between one and two years old,	4
For the next best do. do.	2

SHEEP.

For the best Bakewell or Leicester buck over one year old,	$4
For the next best do. do. do.	2
For the best do. do. under one year old,	2
For the next best do. do. do.	1
For the best four do. do., ewes, over one year old,	4
For the next best do. do. do.	2
For the best four do. do. ewe lambs between four and twelve months old,	2
For the next best do. do. do.	1
For the best Southdown buck over one year old,	4
For the next best do. do. do.	2
For the best do. do. under one year old,	2
For the next best do. do. do.	1
For the best four do. ewes over one year old,	4
For the next best do. do. do.	2

For the best four do. ewe lambs between four and twelve months old,	$2
For the next best do. do. do.	1
For the best Merino buck over 1 year old,	4
For the next best do. do.	2
For the best four do. ewes, do.	4
For the next best do. do. do.	2

HOGS.

For the best Berkshire boar,	$4
For the next best do.	2
For the best Berkshire sow,	4
For the next best do.	2
For the best boar of other breed,	4
For the next best do. do.	2
For the best sow of other breed,	4
For the next best do. do.	2
For the best litter of pigs of any breed, not less than six in number,	4

Stock entered for these premiums, cannot compete for others.

No animal that has previously taken the Society's first premium, will be allowed to compete in the same class.

Ample evidence will be required as regards the pedigree, age and character, of all stock entered for premiums.

AGRICULTURAL IMPLEMENTS.

For the best plough, the merits thereof to be decided by trial,	$10
For the next best do.	5
For the best Drill machine,	4
For the next best do.	2
For the best Straw or Hay cutter,	4
For the next best do. do.	2
For the best Corn sheller,	4
For the next best do.	2
For the best display of agricultural implements,	8
For the next best do. do.	4

The ploughs intended for trial, must be at the exhibition during the whole time. Premiums will be awarded to the best ploughmen:

For the best,	$5
For the next best,	3

AGRICULTURAL PRODUCE.

For the best five pounds of fresh butter, a silver butter knife, value	$5
For the best firkin, or jar of salted or preserved butter, not less than 20 lbs., a silver butter knife, value	5
For the best sample bushel of wheat,	3
For the next best do. do.	1
For the best do. of rye,	2
For the next best do. do.	1
For the best do. of corn in ears,	2
For the next best do. do.	$1
For the best do. of oats,	2
For the next best do. do.	1
For the best display of agricultural produce, generally,	4
For the next best do. do.	2

A statement of the mode and manner of making and preserving the different kinds of butter, will be required of competitors.—The preserved or salted butter, must have been put up at least two months previous to the exhibition.

SPECIAL PREMIUMS.

For such animals as have received the first premium of this or any other Agricultural Society, accompanied with a certificate or satisfactory evidence thereof.

For the best stud-horse,	$20
For the best bull of any breed,	20
For the best cow of any breed,	20

Any animal having before taken the above premium, and thus gained the highest distinction, will not again be permitted to contend.

A PLOUGHING MATCH,

For the trial of ploughs and ploughing, will take place on Friday, the 6th of October, at 10 o'clock.

The judges are authorized to withhold premiums, where the object is not entitled to distinction; and where but one of a class is exhibited, they will award such premium as they think it merits. Those persons who intend bringing animals for competition, must inform the Committee of Arrangement before 10 o'clock, on the first day of the exhibition.

Competition is open to the whole Union.

All stock, &c., contributed, must remain on the ground during the two days of exhibition.

☞ The public sale of live stock will take place on the second day of exhibition, and will be conducted by Wolbert & Herkness.

James Gowen,
Isaac W. Roberts,
Dennis Kelley,
Henry Chorley,
Algernon S. Roberts,
Aaron Clement,
Lewis R. Willard,
William S. Torr,
Isaac Newton,
P. R. Freas,
Committee of Arrangement.

Convention of Breeders.

(CIRCULAR.)

Albany, June, 1843.

The State Agricultural Society of New-York, desirous that some fixed principles should be established as the basis of excellence in the various descriptions of farm-stock, without reference to their *relative* merits as breeds, have appointed the undersigned a committee, with instructions to call the particular attention of breeders throughout the States, to the importance of the subject, and to make the necessary arrangements for a Convention to be held at the Library room of the American Institute, in the city of New York, during its sixteenth annual Fair, in the month of October next, the day to be hereafter noticed; at which breeders of stock and those interested in agriculture, are most respectfully urged to give their attendance, with a view to a full and free discussion of those forms, qualities and properties, which most conduce to intrinsic value; and also that the distinctive characteristics of each separate breed, may be as closely defined as possible.

The Society believe that the decision of such a meeting will offer to the agriculturist the best information that can, at present, be elicited; and which, they trust, may be so satisfactory to the mind of every intelligent breeder, as to lead to greater uniformity of action and opinion, and *possibly* become a standard with them, by which to judge and be judged, in all cases of competition.

With these views of the subject, the committee hope you may deem it of sufficient importance to be present at the proposed Convention, and lend to its discussion the aid of your experience and talents.

The committee will be obliged by any suggestions, in the interim, you may consider of sufficient importance to be communicated to them in relation to this subject.

Francis Rotch,
E. P. Prentice,
C. N. Bement,
George Vail,
Lewis F. Allen.

☞ Editors of the several Agricultural papers in the United States, are requested to publish or notice the above.

Mr Botts, of Newburg, obtained a premium for corn, the yield being 205½ bushels of ears per acre. The land was ploughed in February, and the second week in May, it received 15 wagon loads of manure and two bushels of salt per acre.

For the Farmers' Cabinet.

West India Corn and Oranges.

To the Editors,—I notice in your number for the present month, an extract from the Farmer's Encyclopædia, in which the writer, in speaking of Indian corn, states that "in the West Indies, it rises 30 feet in height; but with all that gigantic size, it produces only a few grains on the bottom of a spongy cob, and is counted on only as rough provender." I am surprised to see such a statement in a work of so much respectability, for it is at variance with the truth, and calculated to mislead many of your numerous readers. I resided in the British West Indies for upwards of 30 years, and state, without the fear of contradiction, that in those islands they generally raise good crops of corn. Its height is rather under that grown here, and the grain something smaller than our best 8 and 10 round yellow—but weighs heavy. The returns per acre, certainly fall short of what they are in the States, on good soil well manured and carefully cultivated, but I have raised 25 bushels per acre, from land which had never been manured, and that with less care than is usually bestowed on it here. The same writer also states, that in the West Indies, "the pulp of the orange is spongy, badly filled with juice, and has too much of a forced flavour to be pleasant." I am free to admit, that there are in that section of the world, oranges which correspond with this description; but at the same time I must remark, that there is also abundance of oranges equal to the best produced in any part of the world. J. T.

Hamilton Township, N. J.,
June 20th, 1843.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Seventh Month, 1843.

"Gardening for Ladies; and Companion for the Flower Garden, by Mrs. Loudon. First American, from the third London edition. Edited by A. J. Downing," well known as the author of a Treaties on Landscape Gardening, Cottage Residences, &c.

We owe thanks to J. W. Moore, Bookseller, 23 Minor street, who has placed the above work upon our table. It is one, which has been long wanted. The simplicity and clearness, with which the author explains every branch of her subject, from the rough handling of the spade, to the more delicate operations of the budding knife, attract at once, and delight the novice and the amateur, who have had but little practical experience. Clear and explicit, and withal very sprightly directions, and hints, will be found in the first part—Gardening for Ladies,—in relation to *stirring the soil—manuring—transplanting—watering—pruning—training—grafting—flour pots—the green house. &c., &c.*, which will not fail to induce, or to enliven, and discipline a taste for the labors, and duties, and delightful enjoyments of the flower garden. A taste for the rearing, and training of flowers is particularly appropriate to woman, and its cultivation may often be attended with happy moral influences.

The second part—a Companion to the Flower Garden—is a Dictionary of the English and Botanic names of the most popular flowers, with directions for their culture, &c., &c., and contains a great mass of instruction and information, from the humble *Anemone* that perfumes your footstep, to our own magnificent *Agave Americana.*

"The great enjoyment of Gardening, is in my opinion," says the author, "only to be obtained by the amateur who gardens himself, and who understands the principles, or reasons upon which each operation is founded; and therefore. I should recommend all persons fond of gardening, and especially ladies who have sufficient leisure, to manage their gardens themselves, with the assistance of a man, to perform the more laborious operations."

This work—price $1,50—as well as others generally, relating to Agriculture, Horticulture, Botany, Plants, &c., may be obtained, wholesale and retail, as above, 23 Minor street, at the lowest prices.

A COMMUNICATION on the manner of raising, and using potatoes, signed "A Farmer" from Chester County was mislaid, and did not come into the Editors hands, till a few days ago. It would now seem unseasonable: it shall be attended to in the spring.

BIBLICAL CABINET.

The 3rd and 4th Nos. of Neander's History of the Christian Religion, during the first three centuries, now in the course of publication, by James M. Camphell & Co., 98 Chesnut street, have come to hand. The work will probably be completed in the next number.

THE Agent for the Patentee of Jones' Multiplying, and Equalizing Bee Hive, a Communication from whom, appears on page 369, has left a very neat model at our office, where it with several others, may be examined. The theory upon which it is based, seems plausible, and we know not why it should not work well. We frequently hear it said, that bees would as leave live in an old hollow tree, as in a palace. Perhaps so:—but the Honey Bee has been long domesticated among us; and so it must be, if regarded either as a source of profit, or amusement. This being the case, the kind of hive that is *best*, becomes a primary question to such as would avail themselves of the industry of this curious creature.

We take this occasion again to refer to Bevan's superior work on the Honey Bee. It contains a great variety of information on the subject; and may be had either of the Publishers, Carey & Hart, corner Fourth and Chesnut streets, or at this office.

AFTER a retirement of three years from all connection with the American Rail Road Journal, and Mechanic's Magazine, D. K. Minor resumes his former station as Co-editor, with Geo. C. Schaeffer. The first number of this Journal, was issued, we believe, eleven years ago, when less than 100 miles of Rail-way were completed upon all our main lines. We have now probably, more than 500 locomotive engines running on between four and five thousand miles of Rail Road, and have expended at least one hundred millions of dollars in their construction. The facilities and rapidity of transportation would seem to be almost as great as need be desired. By means of Rail Roads and Canals, our great business marts have brought distant neighborhoods, almost literally, to their very doors, so that a barrel of flour may be sent from Pittsburgh, for a trifle more than we pay the carter who hauls it from the *depot* in Broad street to our own cellar.

This Journal has laboured long and ardently in the cause, and may be congratulated upon the effect produced.

The number for the present month has come to hand and may be examined at our office, where subscriptions will be received and money forwarded.

WE observe from the English papers, that H. Colman, late Editor of the Genesee Farmer, who left this country for England, about three months since, attended a special meeting of the Council of the Royal Agricultural Society, on the 11th of Fifth month, as an honorary member. The Society, previously to his leaving here, had very courteously tendered to him a welcome reception. No doubt our friend is at home among them.

Subscriptions for his Agricultural Tour and Survey, are received at this office. See No. 7—page 228, of our current volume.

A LETTER has been received from Edward Harris, of Moorestown, N. J., who went out with Audobon to the Rocky Mountains, dated the 1st ult., thirty-six days from St. Louis, and hoping to reach the mouth of the Yellow Stone, in about ten days. Some *new* birds, and many *rare* ones had been procured. The party were all well, and in fine spirits.

THE quantity of rain which fell in the 6th month (June) 1843, was nearly an inch and three quarters of an inch....................................1.676 inches.

Penn. Hospital, 7th mo. 1st, 1843.

There was less rain fell last month, than in any corresponding one, since 1832. On the morning of the 2nd ult. the fields in this vicinity were white with frost, which materially injured the cucumbers, beans, tomatoes, &c., and apparently prostrated the corn; the corn however, finely recovered in a week; and there is now no lack in our market, of the other vegetables. The mountains near Quebec were covered with snow, and some flakes were observed here. The frost extended through the Atlantic states, at least, as far south as Virginia, and west as far as we are advised.

THE United States Gazette says, the first hogshead of Tobacco which has been shipped from the territory of Iowa, was received in St. Louis, this spring. We all know, that a very few years ago, the whole territory was a wilderness.

SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. The money to be paid in advance.

POUDRETTE.

Arrangements have been made by the subscriber with D. K. Minor, of New York, for the sale of this valuable manure. It may be obtained at the office of the Farmer's Cabinet, No. 50, North Fourth street, where we expect to keep a supplyconstantly on hand. The price will be two dollars a barrel, where one or two only are taken—for three or more, it will be somewhat reduced. Josiah Tatum.

The Philadelphia Agricultural Society, at its meeting held on the 7th. ult., resolved that the premiums* which have been offered for the best cultivated farms, be witheld until the next year: the Committee will nevertheless continue to examine all such farms as they may receive notice of; and the condition this year, as well as next, will be considered.

The 10th No. of the "Farmer's Encyclopedia," has been received. The Publishers Carey & Hart, of this city, are placing in the hands of the farming interest, a work of far more than ordinary value. Any subject, connected even remotely with his business, whether it be in relation to tillage, stock, soil, manures, implements or crops, the farmer will find aptly illustrated. It should not fail to be on his shelf: and the more frequently it is referred to, the more it will be valued by himself, and his sons. It should not be forgotton too, by the way, that a goodly portion of the work is highly interesting and useful to the housewife.

A Sample of *new* Virginia wheat, of good quality, was shown in the New York market on the 3rd. inst.

Luther Tucker, Esq., of the Cultivator, Albany, and Secretary of the New York State Agricultural Society, will please accept the thanks of the Editors of this paper, for copies of the Transactions of that Society during the past year.

This is a handsome volume of more than 400 pages, and however exalted our expectations may be in relation to the Agriculture and public spirit of the *Empire* state, it really does them credit. We have read the address of Governor Seward at the Annual Fair, last fall, and that of the President, James S. Wadsworth, before the Society in the winter, with a great deal of satisfaction. There is embodied in the work, an abundance of matter in detail, highly beneficial to the farmer, and particularly calculated to encourage him to look abroad among his brethren of the Plough, and gather from the progress they are making, fresh incitements for the agricultural race before him.

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* See No. 8—page 261, present vol. of Cab.

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